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ABSTRACT

According to this report, many Canadians lack basic skills of literacy and numeracy. As many as 6.9 million Canadian adults, or 1 of every 6 working Canadians, may require some literacy training. This paper outlines the extent of illiteracy and innumeracy in Canada and presents an overview of actions being taken alone or in partnerships by governments, nonprofit groups, and businesses. The focus then shifts to a detailed examination of the role of the private sector. A strong argument is made for increased involvement of this sector, as businesses are deeply affected by the large numbers of workers lacking basic skills. Specific recommendations for individual firms are made, ranging from sponsorship of not-for-profit literacy efforts to developing in-house training programs in basic skills. This report contains an 86-item bibliography and the following eight appendixes: (1) a sampling of Canadian workplace basic skills programs; (2) resources for developing a basic skills program in the workplace; (3) written questionnaire used in conducting literacy audits; (4) interview questions for organizational needs assessment; (5) literacy programs in Edmonton; (6) recruitment techniques; (7) reasons for nonparticipation in adult basic literacy programs; and (8) evaluation questionnaires, and seven tables covering statistics on basic skills deficiencies in Canada. (Author/KC)

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BASIC SKILLS DEFICIENCIES IN THE CANADIAN WORKFORCE

A Project

Submitted to the Faculty of Graduate Studies and Research

In Partial Fulfillment of the Requirements

for the Degree of

Master of Administration

Faculty of Administration

University of Regina

by

Catherine Marguerite Crooks

Edmonton, Alberta

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SYNOPSIS

Many Canadians lack basic skills of literacy and numeracy. As many as 6.9 million Canadian adults, or one out of every six working Canadians, may require some literacy training. The Canadian Business Task Force on Literacy set a rough estimate of $4 billion as the direct cost of illiteracy to business every year.

This paper outlines the extent of illiteracy and innumeracy in Canada and gives an overview of actions being taken alone or in partnerships by governments, not-for-profit groups, and businesses. The focus then shifts to a detailed examination of the role of the private sector. A strong argument is made for increased involvement of this sector, as businesses are deeply affected by the tens of thousands of workers lacking basic skills. Specific recommendations for individual firms are made, ranging from sponsorship of not-for-profit literacy efforts to developing in-house training programs in basic skills.

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1.0 INTRODUCTION

1.1 Overview

Many Canadians lack basic skills of literacy and numeracy. While lack of functional literacy and numeracy affects individuals in a multitude of ways, the focus in this paper is on the economic consequences to Canadian businesses and potential solutions related to these consequences.

Statistics Canada determined that 16 percent or 2.9 million Canadian adults have difficulty reading everyday materials. Another 22 percent or 4.0 million can read if the text is simple, but tend to avoid reading in general. Many people with poor reading skills are equally weak in working with numbers. On the basis of the Statistics Canada survey, researchers concluded that as many as 6.9 million Canadian adults may require some literacy training (Statistics Canada, 1990). This includes one out of every six working Canadians (The Creative Research Group, 1987).

Literacy is clearly a factor in today's changing workplace. Changing technology and demographics, coupled with the aging of the workforce, means that fewer individuals with requisite skills will be available. Lack of these skills leads to lagging international competitiveness and incurs economic and social costs.

A few years ago, the Canadian Business Task Force on Literacy set a rough estimate of $4 billion as the direct cost of illiteracy to business every year (CBTFL, 1988). This cost results from a loss in productivity, decreased product quality, a greater number

of industrial accidents, the inability to promote key workers, the difficulty in adopting new technologies, and the costs of basic remedial training provided by employers. This estimate did not try to factor in any loss to Canada's ability to compete internationally as a result of poorly trained workers.

Larry Mikulecky, Director of the Learning Skills Center at Indiana University, carried out studies that showed that five of every six occupations require high school reading ability. Now, only 2 percent of occupations do not require any reading or writing (CBTFL, 1988). Literacy is a moving target in the workplace, as skill levels even for entry-level jobs continue to increase.

The Statistics Canada researchers noted that finishing high school is crucial to gaining and retaining reading skills sufficient to handle everyday requirements. The correlation between education and literacy is worrisome when connected with the fact that Canada's dropout rate is about 30 percent—one of the highest dropout rates among the industrialized nations (ABC Canada, 1990).

About $50 billion is spent in Canada every year on formal education, $5 billion of which is spent on adult education. As a percentage of GDP, this is one of the highest expenditures on education in the world (Prosperity Initiative, *Learning Well . . . Living Well*, 1991). Yet many students leave the educational system lacking basic skills or vocational training. These young Canadians are virtually unemployable and are difficult to train.

While training and education are not new issues, they are becoming increasingly important due to a variety of disparate

factors, including increased competition, slower productivity advances, sectoral change, technological change, and an aging population. All of these factors are contributing to rising basic skill requirements. A lack of these skills in the Canadian workforce leads to economic inefficiency through mismatches between available jobs and unemployed workers.

Unfortunately, fragmented responsibility has made literacy training a low priority for most of those involved, leading to the development of many short term, and sometimes conflicting, "solutions." Certainly, few Canadian companies offer basic skills training. Budgets for remedial education, where they exist, tend to constitute 1 to 5 percent of the total training budget (Towers Perrin and the Hudson Institute, 1991). There are a number of reasons for this. First, businesses see marginal benefits from undertaking basic skills training. Second, some businesses lack the resources necessary. Third, many senior corporate officials are not yet convinced that there is a basic skills shortage.

There are signs that Canadians are waking up to the skills shortage, however. Researchers at the Canadian Labour Market and Productivity Centre conducted a survey and concluded that a majority of Canadian business and labour leaders saw a need for increased education and training to aid international competitiveness ("Workplace Literacy and the Training Connection." *Globe and Mail*, 1990).

> *"By some estimates, 90% of all scientific knowledge has emerged over the past 30 years, and the pool of information is expected to double again in at most 15 years. Moreover, according to one Ontario study, it is impossible to predict the precise skills that employees will need even five years down the road. It's clear that workers will have to be flexible, and employers will have to retrain them. By the turn of the century, 75% of the current workforce will be due for upgrading"* (Maynard, 1989, p. 95).

The move to an information society will continue to demand that more people have greater levels of skill and knowledge than preceding generations. As Canada's economic mix and level of technology continue to change, there will be fewer and fewer jobs for unskilled workers. The upgrading of workers will be an ongoing task, and one that can only be undertaken in the presence of enabling skills, such as literacy and numeracy.

Canadians currently rely on their formal educational system to provide young people with basic skills. This should only be considered the beginning of a lifetime of learning, training, and if necessary, retraining. A learning culture must be fostered in Canada so that education and learning are seen as investments rather than as expenses. This will require strong partnerships among diverse players, including business, labour, governments, and educational institutions.

This paper is written with three purposes in mind. The first is to describe and examine the problems of illiteracy and innumeracy. The second is to discuss some of the actions being taken by many different players, including government, educational institutions, not-for-profit groups, and businesses. The

third is to move from the macro to the micro level by providing specific recommendations for the private sector. Other writers are encouraged to make recommendations for other players. In particular, public-private sector partnerships for literacy training are very important, and are deserving of more study.

In terms of the structure of the paper, the following section of this chapter will discuss the growing importance of skill development in the changing economy, including the basic skills of literacy and numeracy. Change, such as the increasing complexity of technology, will continue to affect many private organizations, both large and small. This chapter discusses the challenges that will face business firms in the future.

Chapter 2.0 describes the range and depth of the problems of illiteracy and innumeracy. While not all organizations will be affected, it is clear that there are significant problems which will face hiring organizations: they will have no choice but to train new hires and some of their existing staff in basic skills. This chapter answers the question "Why should a business firm be interested in basic skills training?"

Chapter 3.0 discusses a number of issues with respect to the role of the private sector in literacy training; for example, conflicting beliefs about the locus of responsibility and the state of literacy training. It goes on to describe the "state of the art."

Chapter 4.0 describes the role and some activities of governments, voluntary agencies, and educational institutions in literacy training. These agencies provide resources upon which

the business firm can draw for specific assistance and conversely, to which business firms can contribute to address the general problem. This issue is discussed in greater depth in Chapter 5.0 which is concerned with partnerships between government (and other institutions) and business.

Chapter 6.0 goes to the micro level and provides a set of recommendations and resources which will assist individual firms to identify problems of literacy in the workplace and develop programs to address these issues.

Chapter 7.0 provides a brief summary, concentrating again on the central role business can play in coordinating efforts to improve the level of basic skills attainment in the Canadian workforce. Firms are encouraged to develop partnerships between themselves and governments, educational institutions, and not-for-profit organizations.

Structure of the Paper

Chapter 1.0 puts the issue in context by describing the environment.

Chapter 2.0 outlines the problem of basic skills deficiencies in some depth.

Chapter 3.0 looks at basic skills deficiencies from the perspective of the private sector and describes its responses to the problem.	Chapter 5.0 is a brief discussion of joint actions or proposals. ↔ ↔ ↔ ↔ ↔ ↔ ↔ ↔	Chapter 4.0 looks at basic skills deficiencies from the perspective of the public sector and describes its responses to the problem.
Chapter 6.0 gives specific recommendations for the private sector. The appendices contain informational resources to assist businesses in implementing the recommendations.	Chapter 7.0 summarizes the paper.	

1.2 Skills

Many economists and educators in industrialized nations are talking about skills these days—often as a way of referring to the broader issue of workforce training. Education and training are not new issues, but they are becoming more important due to a variety of factors, including increased competition, slower productivity advances, sectoral change, technological change, and changing demographics. All of these factors are contributing to the need for workers with basic skills. A lack of these basic skills leads to economic inefficiency through mismatches between available jobs and job seekers.

Sidebar: What are skills?

Sometimes, researchers use the word "skills" in a generic way or as a form of shorthand to refer to a specific group of skills. One such group is enabling or basic skills—those that enable people to "learn how to learn." Usually, basic skills refer to the ability to read and write (literacy), compute (numeracy), and speak. At the other end of the spectrum are higher-order skills, which are generally more intellectually demanding. These include problem solving, critical thinking, and decision making. Sometimes "skills" is a term used to define a group of personal qualities and learned abilities, such as the ability to work well in a team or computer literacy.

In this paper, the use of the term "basic skills" refers to literacy and numeracy.

The literacy of its workforce is a key factor that will affect Canada's ability to compete in the future. In recent studies, researchers have noted a high rate of illiteracy amongst the Canadian population (further developed in Chapter 2.0). Func-

tional illiteracy is not a problem in Japan (1 percent) or in what used to be West Germany (4 percent) (Perrin, 1990). Many Asian and European countries also have a lower rate of illiteracy than does Canada (Lund and McGuire, 1990). The United States, while facing literacy deficits similar to or even larger than those apparent in Canada, is several years ahead of Canada in recognizing and dealing with illiteracy in the workforce. American efforts to solve that country's illiteracy crisis may account for the fact that American youths scored higher than their Canadian counterparts in the 1987 Southam literacy survey:

> In a literacy test of youth, aged 21 to 25, carried out in both Canada and the United States, young Americans performed better than Canadians on more than two-thirds of the questions. In particular, the Americans clearly outperformed the Canadians both in general reading proficiency and in using everyday documents (Dr. Paul Nesbitt, the research director of the Southam literacy survey quoted in Perrin, 1990, p. 10)

1.3 Increased competition

1.31 Globalization and competition

World markets are becoming more integrated and more competitive as a result of improved communication and transportation and the elimination of trade barriers through successive GATT rounds and the creation of free trade blocs. The power of the move to global markets—shown by a seven-fold increase in international trade in the period 1970 to 1987—is considerable (Johnston, 1990). With increased international trade comes increased competition, in part because of the sheer number of

firms and in part because there is currently plant overcapacity in some key manufacturing industries (e.g., automobiles). With globalization, traditional competitive strengths are eroded. As nations gain equal access to raw materials, financial resources, technological innovations, and key markets, the basis of competition gradually shifts, focusing on the quality of those nations' human resources (Benimadhu, 1989). The global marketplace demands that Canadian companies display more flexibility, achieve higher levels of quality, and move through the innovation cycle faster. All of these qualities make use of Canada's comparative advantage in terms of human resources as they require a motivated, highly-trained workforce.

"Unskilled work is being shifted to Mexico and other low-wage countries—this is the long-term trend. As long as our dollar was worth US75 cents we were insulated from this trend. Our manufactured goods were still competitive in the American market. Now that our dollar is more than a dime higher we are finding out what the U.S. discovered ten years ago—we're not competitive in world markets in manufactured goods" (Taylor, 1991, p. 15).

1.32 Canada's competitive strengths

A member of the OECD and the G-7 group of countries, Canada holds an enviable economic position. In the mid-eighties, Canada had one of the fastest growing economies among OECD nations (Johnston, 1990). Canada counts its many renewable and non-renewable resources, strong infrastructure, and a well developed education network among its many assets.

Through the 1980s, Canada was consistently ranked in the top

half of a group of 22 OECD countries by the World Economic Forum and the International Institute for Management Development in terms of overall competitiveness. One of the factors in the weighted ranking is human resources. Canada's rankings from 1984 to 1990 are shown in Table 1.

Table 1: Canada's competitive ranking among 22 OECD countries

Year	*Rank*
1984	11
1986	7
1989	4
1990	5

Sources: "Canada's Competitiveness Slips," *Globe & Mail*, 1990 and Johnston, 1990

While the *World Competitiveness Report* uses rather subjective criteria and weightings, making it difficult at times to identify exactly why a country's ranking has changed, it is interesting to note that the 1990 rankings placed Canada second overall in terms of human resources.

1.33 Canada compared to key rivals

While Canada's economy has been performing well, there are warning signs that the country needs to become more competitive. One key indicator of this is the rate of productivity improvement. The newly industrialized nations and other countries currently achieving large productivity advances threaten Canada's enviable standard of living.

After all, it is the relative rate of productivity change, not the absolute rate, that influences a country's ability to compete globally. Again, rankings help to paint the picture. In the years between 1979 and 1986, only three of the OECD countries—Greece, Ireland, and the United States—had lower rates of productivity improvement than Canada (Larson, 1989). Wallace (1991) summarized the situation, noting that a variety of measures showed that productivity growth in the 1980s in Canada was slower than that of most of its trading partners. As Canadians experience one of the highest jobless rates among industrialized countries, it is clear that Canada's slower rate of productivity growth is affecting real incomes and the rate of employment (Beauchesne, 1992).

A second competitive indicator is Canada's position as a trading nation. One-third of Canada's GDP comes from its exports, with the United States accounting for about three-quarters of Canada's export trade. This level of trade can only be maintained if Canada remains a strong competitor. Canada's major trading partners are not nearly so reliant on trade, with trade accounting for only 10 percent of the GDP in the United States and for 14 percent of Japan's GDP (Prosperity Secretariat, *Prosperity Through Competitiveness* , 1991).

1.34 Striving to increase productivity

The Conference Board of Canada found that almost 9 out of 10 survey respondents believed their companies would have to achieve major productivity gains during the first half of the

1990s (Benimadhu, 1989). This is borne out by OECD data that shows that Canada has been underachieving in this area for the last two decades when compared to its competitors in the industrialized world. While part of this failure is due to the small size of the domestic market, leading to shorter production runs and later adoption of new products and technologies, these factors do not completely account for the differentials in productivity rates (Johnston, 1990).

Table 2: Average annual productivity growth in selected countries/regions, 1960-85 (percentage)

Country/ Region	*U.S.*	*Canada*	*Japan*	*Germany*	*EC*
Agriculture	3.4	3.5	4.9	5.3	5.3
Industry	1.7	2.3	6.4	3.5	3.6
Manufacturing	2.8	2.6	7.7	3.7	4.1
Services	0.9	1.4	4.1	2.3	2.0
Total economy	1.3	1.9	5.6	3.2	3.2

Source: OECD, *Historical Statistics 1960-85*(Paris, 1987).

Because human capital is the input factor that is common across countries and companies, many experts believe that gains will only be accomplished by improvements in the "soft side" of the productivity equation; that is, by improvements in workers' skills. In the industrialized world, knowledge, skills, and organization have become more important to achieving productivity gains than a company's physical assets. This conclusion is supported by Johnston (1990):

> The skill level of the Canadian workforce combined with our ability to obtain and adopt technology will in large part determine the competitiveness of the nation (pp. 5 and 6).

As the following examples show, one of the most obvious ways to improve productivity in an organization is to ensure that all workers can read, write, and do basic calculations. This would decrease the number of incorrect invoices sent out, reduce typos and factual errors in documents, decrease production waste due to inaccurate measuring, and allow proper maintenance of machinery in accordance with written manuals (Lund and McGuire, 1990).

1.4 Sectoral change

The service sector provides approximately 70 percent of all employment in Canada. This is also the sector where most new jobs are being created. The largest growth rates are to be found in industries such as business services, health services, retail trade, and education (Kutscher, 1990). While a few of these new jobs are unskilled, most require at least basic skills. Canadian companies are already voicing their concern about the growing lack of entry-level workers and of supervisory, managerial, professional, and technical employees (Towers Perrin and the Hudson Institute, 1991). This increased demand for "knowledge" workers is expected to continue. Indeed, Johnston and Packer (1987), noted that:

> jobs that are currently in the middle of the skill distribution will be the least-skilled occupations of the future, and there will be very few net new jobs for the unskilled (p. 100).

With continued gains in agricultural technology, employment in that sector is declining still further. At the same time, technology is diminishing the size of the manufacturing sector. Innovation and new materials mean that production demands for traditional raw material are reduced, leading to fewer people being employed in their extraction and processing. As production methods become ever more efficient, fewer people will be working in the durable goods sector. (National Literacy Secretariat, *Creating a Learning Culture* ,1990). This displacement of workers as sectors of the Canadian economy grow and decline in importance is one reason why training and education is becoming more important. A second reason is because knowledge is becoming increasingly important—even more important than raw materials—in creating wealth. In this context, it is worth noting that the service sector is lagging behind the manufacturing sector in terms of productivity. Increased productivity in this sector would help improve Canada's overall economic position. An important way to reach higher productivity levels is to provide the workforce with higher levels of skills (Chisman, *Jump Start* , 1989).

1.5 Technological change

New technology "shocks" make experience obsolete. Thus, as productivity advances or product adaptations transfer to the commercial sector, they require workers to improve their skills or, at times, learn new ones. A more skilled workforce may be the key to a faster rate of development and adoption of new technology, helping Canada to compete against European nations, Japan, and

the United States. With an accelerating rate of change, skills rapidly become out-of-date. Workers must continually retrain.

The average worker is likely to change jobs or careers eight times, requiring updating of old skills or the acquisition of new ones. Today, technological change makes specialized skills obsolete every three to five years, when even ten years ago, obsolescence took seven to fourteen years (National Literacy Secretariat, *Creating a Learning Culture* , 1990). Obviously, workers require enabling skills – literacy and numeracy – if they are to keep up with, much less take advantage of, technological change. Good developmental skills and an understanding of the need to continually retrain means a more flexible workforce for Canada.

1.6 Changing demographics

Canada's birthrate has been declining since the 1960s, so the workforce is growing more slowly and is gradually growing older. While it is likely that more women and minorities will be participating in the labour force over the next decade, partially offsetting the effects of a lower birthrate, the demographic curve of the Canadian workforce will definitely develop a middle-aged bulge.

"Whereas 49 percent of the labour force was over the age of 34 in 1986, by 2000 almost 60 percent will be older than 34.... New skills requirements will increasingly have to be met through retraining of the existing work force. Most of the people who will need new skills in the year 2000 have already left school" (Prosperity Secretariat, *Learning Well . . . Living Well* , 1991, p. 3).

With the baby boom generation reaching middle age, unemployment may decrease, but labour shortages or job-skill mismatches are expected to increase. Perhaps the most noticeable change for employers will be an increasing lack of newly educated workers, aged 16 to 24. As a result of experiencing labour or skill shortages, some Canadian companies are experimenting with innovative approaches to recruitment. Along with traditional approaches, they are placing special emphasis on recruiting "women, visible minorities and immigrants, retraining present workers and encouraging job rotation" (Towers Perrin and the Hudson Institute, 1991, p. 8). One of the most unusual recruiting programs found in the literature is that run by Travelers Insurance, an American company, since 1967. Travelers takes people lacking basic skills into an 18-week training program. The first eight weeks consist of full-time classes, while the remaining ten weeks are an equal mix of class time and on-the-job training. The trainees are paid at minimum wage throughout the training program. After successful completion of the program, trainees receive the job they trained for. Remarkably, the completion rate is 98 percent (Ritts, 1986).

1.7 Rising skill requirements versus availability

It is obvious that many new jobs will require more education or training. This conclusion is reinforced by Employment and Immigration Canada estimates that indicate that almost two-thirds of the new jobs created by the year 2000 will require more than 12 years of education; 40 percent will require more than 17 years

(National Literacy Secretariat, *Creating a Learning Culture* , 1990). Some analysts believe that by the year 2000, more than 70 percent of all jobs will require workers to read at a postsecondary level. Finally, it is predicted that those occupations requiring high levels of education will generally grow faster than occupations requiring lower skills. Yet nearly half of the people already in the workforce do not have a high school diploma. (Prosperity Secretariat, *Learning Well . . . Living Well* ,1991). Table 3 outlines changing skill requirements in terms of the years of training required.

Table 3: Changing occupational skill requirements

Skill Level/ Years of Training	*1986 Labour Force*	*1989-2000 New Jobs*
More than 16 years	23.0%	40.0%
13 to 16 years	21.6	17.4
12 years	8.7	5.5
Less than 12 years	46.7	37.1

Source: Employment and Immigration Canada, 1990 (Noted in Prosperity Secretariat, *Learning Well . . . Living Well*, 1991)

The job market will be full of surprises in the 1990s, due in part to competition and technological change. Every year, about one in three people change jobs or are unemployed for a time. This type of environment requires workers who are flexible and adaptable; highly trained and skilled (Prosperity Secretariat, *Prosperity Through Competitiveness* ,1991). The further Canadian

workers fall from this standard, the more economic output that is foregone.

NovAtel put this lesson into a company motto: "the better trained and more flexible the workforce, the more productive the company." Du Pont found that "business excellence cannot be separated from people excellence" (Johnston, 1990, pp. 43 and 26).

Future economic success will depend in part on the skill level of Canadian workers. As stated in the *Learning Well ... Living Well* report: "Our prosperity depends on major improvements in the general level of skills held by all Canadians, as well as on having many more people with advanced and specialized skills" (Prosperity Secretariat, 1991, p. v). Higher rates of productivity and output, while affected by many factors, will be achieved in part through education and training of the labour force. This was strongly pointed out as a result of Edward Denison's landmark study of economic growth in the American economy between 1929 and 1982, which found that, "all told, people skills accounted for 73 per cent of America's growth over more than fifty years" (National Literacy Secretariat, *Creating a Learning Culture* , 1990, p. 22).

"Even while we confront jobless rates of nearly 8 percent, the job vacancy rate—jobs that cannot be filled because no one can be found with the right qualifications—is the highest in nearly 20 years. There are 600 000 job vacancies in an economy with almost one million unemployed" (Janice Moyer, President, Information Technology Association of Canada speaking in Toronto, *Globe and Mail*, February 20, 1991, quoted in Prosperity Initiative, *Learning Well . . . Living Well* , 1991, p. 3).

While economic times are tough and companies are currently reducing staffing levels, the majority of respondents in the *Workforce 2000* survey noted their concern about the decreasing number of entry-level applicants and about shortages of other types of workers (Towers Perrin and the Hudson Institute, 1991). In that survey, corporate responses to the question of labour shortages and its impact on recruiting were summarized as follows:

> Finding employees who can do the job—or who can be trained to do the job—is increasingly a challenge as the skills content of jobs increases, as functional literacy rates drop, and more and more workers are unable to perform the tasks required by the position (Towers Perrin and the Hudson Institute, 1991, p. 10).

In Canada, Employment and Immigration Canada has determined that skilled workers are required for approximately 300 occupations, while some 14 percent of manufacturers noted a shortage of skilled labour in a Statistics Canada survey (Maynard, 1989). In one report it was noted that, by 1995, only 5 to 7 percent of jobs in Canada will be unskilled ("Data Bank", 1991).

The mismatch between necessary skills and available jobs is made worse by Canada's high dropout rate: approximately 30 percent of all students do not complete high school. Those workers with less education tend to be unemployed more often and for longer periods. This is a trend that is expected to strengthen. (National Literacy Secretariat, *Creating a Learning Culture* ,1990).

1.8 Learning to learn

To improve economic performance and promote a more equitable society, Canada's workforce as a whole must attain substantially higher levels of skills. It is becoming clear that Canada needs better literacy standards merely to maintain its citizens' standard of living. In particular, those workers lacking basic or enabling skills must be encouraged and assisted to improve their skills.

Canadians rely on their formal educational system to provide young people with basic skills. This should only be considered the beginning of a lifetime of learning, training, and if necessary, retraining. The alternative is an unacceptably high school dropout rate, high levels of unemployment due to skill shortages, greater expenditure on welfare, and higher rates of crime. A sobering study in the United States concluded that:

> Almost a quarter of those now entering high school will fail to complete it. And most of those who do, according to current testing data, will be less literate than the graduates of a decade ago (Lund and McGuire, 1990, p. 8).

The move to an information society will continue to demand that more people have greater levels of skill and knowledge than preceding generations. As Canada's economic mix and level of technology continue to change, there will be fewer and fewer jobs for unskilled people. The upgrading of workers will be an ongoing task, and one that can only be undertaken in the presence of enabling skills, such as literacy and numeracy.

2.0: BASIC SKILLS DEFICIENCIES IN CANADA

Chapter 2.0 describes the range and depth of the problems of illiteracy and innumeracy. While not all organizations will be affected, it is clear that there are significant problems which will face hiring organizations: they will have no choice but to train new hires and some of their existing staff in basic skills. This chapter answers the question "Why should a business firm be interested in basic skills training?"

2.1 Defining illiteracy

There are a number of ways to define illiteracy. Because each definition gives rise to different meanings, interpretations, findings, and applications, individuals concerned with literacy education tend to argue the merits of the various definitions.

One commonly accepted term is basic illiteracy—a total inability to read or write (Perrin,1990). This term refers to persons who cannot read a single word, nor recognize the alphabet, nor write their own names. With mandatory schooling, basic illiteracy isn't the central issue in Canada. Rather, a more important phenomenon is functional literacy, which can be defined as "the ability to use the printed materials which people come across at work, at home and in the community" (Perrin, 1990, p. 7).

Sidebar: How should functional literacy be defined?

It is difficult to define functional literacy in a way that is generally accepted. In part, this is because the appropriate definition often relies on context. This can be seen by examining the way literacy has been defined in different periods. In 1890, people who could sign their names were considered functionally literate. In 1946, people with a grade 4 education were considered literate. In contrast, in 1991, the American National Literacy Act defined functional literacy much more broadly, stating that literacy is "an individual's ability to read, write, and speak in English, and compute and solve problems at levels of proficiency necessary to function on the job and in society, to achieve one's goals, and develop one's knowledge and potential" (Prete, 1991, p. 20). Researchers at Statistics Canada opted for a more descriptive definition of functional literacy; one that lends itself more readily to measurement and analysis (see section 2.2).

The issue underlying the definition of functional literacy is whether people have the skills necessary to participate fully in society. As life in industrialized nations becomes more complex and as technology changes the skills people need to have, literacy standards continue to rise.

The ever-increasing literacy standard is particularly pertinent in the workplace, where technology and complex roles and relationships are major factors in defining what skills are required. Because various workplaces have different requirements, some argue that definitions of workplace literacy must be specific to particular workplaces (Dunn-Rankin and Beil, 1989).

2.2 Assessing illiteracy in Canada

In 1989, Statistics Canada set out to determine the number of illiterate Canadian adults, creating a survey to collect primary data.

Statistics Canada defined functional literacy in terms of a person's ability to process information:

> [T]he information processing skills necessary to use the printed material commonly encountered at work, at home and in the community.
>
> **Level 1**: Canadians at this level have difficulty dealing with printed materials. They most likely identify themselves as people who cannot read;
>
> **Level 2**: Canadians at this level can use printed materials only for limited purposes such as finding a familiar word in a simple text. They would likely recognize themselves as having difficulties with common reading materials;
>
> **Level 3**: Canadians at this level can use reading materials in a variety of situations provided the material is simple, clearly laid out and the tasks involved are not too complex. While these people generally do not see themselves as having major reading difficulties, they tend to avoid situations requiring reading;
>
> **Level 4**: Canadians at this level meet most everyday reading demands. This is a large and diverse group which exhibits a wide range of reading skills.
>
> Canadians at levels 1 and 2 are described as having skills too limited to meet everyday requirements, while those at level 3 have a reading proficiency enabling them to handle reading demands within a more limited range (Statistics Canada, 1990, pp. 1 and 2).

Functional illiteracy generally refers to Canadians reading at levels 1, 2, and 3. Statistics Canada (1990) determined that 16 percent or 2.9 million Canadian adults have reading skills described by levels 1 and 2, while another 22 percent or 4.0 million have reading skills described by level 3.

Table 4: Reading ability of Canadian adults aged 16 to 69

	Thousands	*Percent*
Level 1	1,262	7
Level 2	1,622	9
Level 3	3,965	22
Level 4	11,175	62
	18,024	100

Source: *Survey of Literacy Skills Used in Daily Activities*, Survey Overview, Statistics Canada

Moving east to west, literacy levels increase. Newfoundland had the highest recorded illiteracy rates, with Statistics Canada reporting 20 percent of the population reading at levels 1 and 2. The western provinces, British Columbia (83 percent), Alberta (79 percent), Saskatchewan (81 percent), and Manitoba (81 percent), had the highest levels of literacy (McDougall, 1988).

The Statistics Canada researchers noted that, of adults born outside Canada (3,177,000 people), almost 30 percent have limited everyday reading skills in either English or French (Statistics Canada, 1990). This fact has implications for immigration policy, particularly regarding the provision of language training to many new immigrants.

The Statistics Canada researchers (1990) conclude that as many as 6.9 million Canadian adults may require some literacy training in order to achieve functional literacy (level 4) This includes one out of every six working Canadians (The Creative Research Group, 1987). The researchers went on to indicate that

most Canadian adults with weak reading skills had equally poor numeracy skills.

Using definitions similar to those used by Statistics Canada, the number of Americans with limited reading ability (levels 1 and 2) could be as high as 60 million, or up to one-third of the population (Kozol, 1985). Still, Americans have paid more attention to the problems of illiteracy and innumeracy in recent years than have Canadians. This perhaps accounts for the result that American young adults, when given the same survey questions, performed better than a similar group of Canadians in terms of literacy standards. This fact may provide some hope in that it can be seen as evidence that greater awareness of the problem of illiteracy and the mobilization of business, education, and government resources to combat it have been at least partially effective in the United States.

2.3 Major structural influences on illiteracy

2.31 Social factors

> *"Poverty and education play major roles in deciding whether illiteracy is transmitted from one generation to the next. The children of the jobless, the working class and the poorly educated are much more liable to be illiterate"*(Calamai, 1987, p. 7).

Kozol (1985) said that "illiteracy does not 'breed' illiteracy. But it does set up the preconditions for perpetuation of the lack of reading skills within successive generations" (p. 59). In Canada these preconditions are seen in certain groups that

tend to have lower rates of literacy, including older adults, Aboriginal people, and immigrants. The fact that 1 million children in Canada live in families whose income falls below the poverty line makes it very likely that illiteracy will continue to be a problem (Dale, 1990).

Writers of the Statistics Canada report (1990) noted that finishing high school is crucial to gaining and retaining reading skills sufficient to handle everyday requirements; the agency's researchers showed that only 8 percent of adults with a high school diploma read at levels 1 and 2. The remaining 92 percent are considered functionally literate. Another researcher, Bloom (1990), concluded that there is "a strong correlation between dropouts, lower socio-economic status and illiteracy" (p. 5). The correlation between education and literacy becomes worrisome when one notes that currently almost one-third of Canadian students drop out before completing high school, a rate that has not diminished significantly over the past few decades. According to materials published by the Canadian Labour Market and Productivity Centre, this is one of the highest dropout rates seen among industrialized nations (ABC Canada, 1990).

Interestingly, "Canadians view illiteracy as more of a social problem (46%) than either an educational (26%) or an economic issue (10%)." As a result, Canadians put most of the blame on individuals and their families and expect them to undertake most of the corrective action, rather than on employers, communities, the educational system, or governments (ABC Canada, 1990, p. 5).

Fortunately, Canadians seem relatively aware of the need for literacy training, although they are not as clear about the causes of illiteracy and current remedies for the problem. ABC Canada found that:

> Canadians view literacy as an important societal issue.... Ensuring that Canadians can read and write adequately is ranked [highly] by over two-thirds (67%) of the population.... Most Canadians believe that literacy skills at work and in other areas of life are 'very important' (86% and 85% respectively). Moreover, the majority of the population think that basic literacy skills are more important today than 10 or 20 years ago (ABC Canada, 1990, pp. 1 and 2).

2.32 Economic factors

Literacy is a moving target in the workplace; skill levels even in entry-level jobs continue to increase. Illiterate workers who are now employed are adversely affected as jobs become more complex due to technological developments. This problem is exacerbated by the fact that an illiterate person generally does not respond well to classroom training methods and so is often considered unemployable.

Literacy and level of education are associated with employment rates. "From 1975 to 1988, while the national unemployment rate averaged under eight per cent, more than ten per cent of the people who had less than nine years of schooling were unemployed. This trend has worsened over the past decade, and is expected to be even more serious in the future" (National Literacy Secretariat, *Creating a Learning Culture* ,1990, p. 7). What is even more staggering is the fact that more than half the

illiterate adults in Canada have given up any hope of being employed, and so are not included in these unemployment figures (Ritts, 1986). This untapped source of human potential becomes a drag on the Canadian economy.

2.33 Political factors

The inadequacy of funding for literacy training seems to arise from three factors: a lack of political will, short sightedness, and tight budgets. The Ontario government determined that it was fully repaid for its investment in literacy training within three-and-a-half years because of the payments of income tax and sales tax being made by formerly illiterate (and jobless) people who were now working. Calamai (1987) also claimed that "the investment by the federal government, though a half-share of the training costs, yields a 25-per-cent annual return to the Gross National Product from the new wages" (p. 31).

Luke Batdorf, president of Laubach Literacy of Canada, gives another reason for lack of funding. He thinks that federal officials just "aren't willing to get into a fight with the provinces over who should be responsible for literacy" (Calamai, 1987, p. 45). And why don't the provinces pay for literacy programs? Peter Calamai of Southam News suggests it is simply because they don't place a priority on spending for literacy.

> *"Although it has the nation's worst literacy problem [44 per cent according to the Southam survey], Newfoundland spends the least—$340,000 in provincial funds or only $2 per illiterate a year. . . . 'We're a poor province and we already spend all this money on education. It makes sense to talk about publicity and promotion when you see the size of our literacy problem. But none at all when you see the priority it's given [by government]'"* (Calamai, 1987, p. 21).

Some of the same funding problems are found in the United States, where, taking all federal, state, municipal, and private literacy programs together, about $1.60 is spent per person enrolled in a literacy program (Kozol, 1985).

The political problems don't lie solely within the federal and provincial governments. Even literacy groups themselves engage in in-fighting over ideology and pedagogy/androgogy. While all methods of teaching reading—paid teachers versus volunteers, community efforts versus national efforts, whole language versus phonics—have been shown to be more or less equally effective, the literacy groups are like "warring religious factions." According to Mary Norton, an Edmonton literacy specialist, "the correct approach begins not with the choice of technique but with involving the whole community so literacy programs will survive the uncertainty of government funding" (Calamai, 1987, p. 43).

2.4 Literacy in the workplace

Literacy is an issue that has been of importance to many workers and employers. Now, however, the issue has gained a higher profile due to major changes in how work is performed. The major reason is technological change.

> *"Between 1971 and 1981, technological change cut employment for workers with less than Grade 9 education by 15 per cent and by eight per cent for high school dropouts"* (Calamai, 1987, p. 39).

Larry Mikulecky, Director of the Learning Skills Center at Indiana University, carried out studies that showed that five of every six occupations in the United States require high school reading ability. Mikulecky found that only 2 percent of occupations do not require any reading or writing. Most people in the studies had to read for 2 hours each day, with materials ranging from grade 10 to grade 12 in terms of reading difficulty. Even blue collar workers are required to read for about 97 minutes each day (CBTFL, 1988). As a result of these increased reading requirements, employers have found themselves rejecting entry-level applicants more often because of inadequate writing and verbal skills than because of a lack of experience (Towers Perrin and the Hudson Institute, 1991).

About one-quarter of the employers surveyed in a recent Canadian study are also finding they are having trouble with Aboriginal and immigrant workers whose mother tongue is not English or French. While this group of workers is not large, it does have a high rate of illiteracy in the new language (DesLauriers, 1990).

2.5 Economic costs of illiteracy in Canada

Sidebar: How does illiteracy affect business costs?

An overview of the costs of illiteracy were noted in Robert DesLauriers' recent study, *The Impact of Employee Illiteracy on Canadian Business:*

- Twenty-seven percent of reporting companies indicate that product quality is adversely affected by illiteracy in the workforce;
- Forty percent of companies see the effect of illiteracy in errors in inputs and processes in production;
- Thirty-two percent of companies feel they can associate some productivity losses with literacy deficits in their organizations;
- Other associated problems are health and safety, absenteeism and difficulties in reassignment of staff;
- Problems with functionally illiterate workers arise in all regions of the country and in all economic sectors;
- Problems with illiteracy often come to light only as a by-product of some other change in the workplace, such as the introduction of new technology

(DesLauriers, 1990).

The Canadian Business Task Force on Literacy tried to set a dollar value on the direct costs of illiteracy to Canadian business. The task force came up with a rough estimate of $4 billion in direct costs to business every year (CBTFL, 1988). This results from a loss in productivity, decreased product quality, a greater number of industrial accidents, the inability to promote key workers, the difficulty in adopting new technologies, and the costs of basic remedial training provided by employers. The task force did not try to factor in any loss to Canada's ability to compete internationally as a result of poorly trained workers.

Extrapolating further, the task force felt it could conclude

that illiteracy cost Canadian society $10 billion each year (CBTFL, 1988). This figure is the result of numerous considerations. For instance, illiterate people:

- are more likely to be school dropouts;
- have a greater tendency to become teenage parents;
- are more often unemployed, leading to lost earnings and reduced purchasing power;
- place strain on the social assistance system;
- pay fewer taxes;
- increase literacy-related training costs;
- are more likely to turn to crime;
- are sick more often.

Similarly, in a number of American studies researchers have estimated the cost of the skills deficit to be anywhere from $20 to $25 billion every year, considering lost wages, profits, and productivity, and tax-revenue losses. It is believed that American businesses spend $300 million annually on remedial training alone—ESL, basic math, reading, and writing (Zemke, 1989 and Lee, 1989). The Canadian Business Task Force on Literacy (1988) estimated that Canadian companies spend about $50 million each year on "basic literacy training" (p. 22).

2.6 Conclusion

Functional illiteracy is a significant issue in Canada, intimately affecting almost 7 million adults. Illiteracy is deeply rooted in Canada's social, economic, and political fabric. It is an issue of particular import for the private sector, because it gives rise to substantial economic costs.

3.0 THE PRIVATE SECTOR AND ILLITERACY

Chapter 3.0 discusses a number of issues with respect to the role of the private sector in literacy training; for example, conflicting beliefs about the locus of responsibility and the state of literacy training. It then describes the "state of the art."

3.1 Why should the private sector be involved in basic skills training?

3.11 Workers as strategic resources

Business must become an important partner in workforce training if Canada is to develop an adequate supply of flexible, skilled workers. Companies must begin to think of employees as strategic resources. Senior managers must begin to give training programs top priority, sending a signal throughout the organization that training in basic and other skills is worthy of corporate time and attention. Already, many companies realize, in theory at any rate, that skills upgrading is necessary for competitive performance.

When the Conference Board of Canada surveyed companies to determine what near-term changes would create corporate challenges, it found that the top three issues were productivity improvements, greater employee involvement, and responding to technological change (Benimadhu, 1989). In terms of human resources, respondents gave the following list of major issues being faced by their companies.

Table 5: Major issues confronting human resource management in the next five years

Issue	*Percent Responding*
Productivity improvement	59
Quality of services and products	52
Training and re-training	34
New technology	28
Employee participation	15

Source: The Conference Board of Canada; Benimadhu, 1989

Many respondents discussed their corporations' plans to institute technological upgrading and quality control programs to improve productivity rates. Almost all respondents, however, noted that the preferred route to productivity improvement would be through making better use of their corporate human resources (Benimadhu, 1989).

Managers also understand that an adaptable, high-performing workforce is necessary before various forms of organizational change can take place. This understanding stands out clearly in a Conference Board survey where 70 percent of the companies noted that functional illiteracy was a significant problem. A quarter of the organizations said illiteracy was retarding the introduction of new technology, while 34 percent noted that illiteracy was obstructing training in new skills. Many of the companies felt that illiteracy was leading to lower product quality, lost productivity and competitiveness, decreased levels of health and safety, increased absenteeism, poor customer service, less employment equity, a restricted ability to appraise and promote

workers, and inflexibility in assigning staff. These problems often came to light only as a by-product of some other change in the workplace, such as the introduction of new technology (CBTFL, 1988). Overall, there is a realization that much skill, talent, and motivation is lost when the workforce lacks literacy and numeracy skills.

With three-quarters of the people who will be working in the year 2000 already in the workforce, the business community must accept its responsibility to provide some form of continuous skills upgrading. The other options—to continually increase investment in capital and technology, to relocate businesses to find cheaper or more skilled labour, or to accept a decline in Canadians' standard of living—are not very attractive. The first alternative assumes that there will be new capital to invest and that the necessary innovation will take place. (It is interesting to note that innovation often relies on the ideas brought forward by trained workers who intimately understand their work and work processes.) The second alternative is already of concern to labour and government, as businesses relocate to free trade zones, or *maquiladoras,* in Mexico, putting Canadians out of work. The third alternative will occur if no training is undertaken. In this case, a greater proportion of jobs falling to Canadians will be unskilled, low-paying ones, leading to a lower standard of living for many. If Canada is to remain competitive, businesses must think of employees as strategic resources, worthy of continued investment in the form of training.

"The business community must ensure that the mainstream of the work force is productive and competitive. It is the responsibility of individual employers and employees to 'put business into training'"(Report of the Focus 2000 Task Force on Education and Training, Executive Summary & Recommendations, Canadian Chamber of Commerce, 1989, in Prosperity Secretariat, *Prosperity Through Competitiveness* ,1991, p. 12)

3.12 Canadian companies face a skills shortage

Beginning in about 1988, members of the Canadian Manufacturers' Association and the Canadian Federation of Independent Business began to see an increasing shortage of skilled workers. The resource industry in Alberta became so concerned about the possibility of severe shortages that it helped Alberta Career Development and Employment create and distribute a video called "Skill Shortages in the 1990's" (1991), the purpose of which was to raise awareness of the problem in the business and education sectors.

The skills shortage is a real one; there are fewer young people available and educational standards are rising, even for entry-level positions. In a study undertaken by the Conference Board in the United States, researchers reported on minimum levels of education for entry-level jobs, indicating that approximately 80 percent of respondents across all industries required new employees to hold a high school diploma. Almost 9 percent demanded specialized vocational or technical training. A further 4.5 percent required a college education for their entry-level workers. Lund and McGuire (1990) included a list of the job skill deficits most apparent to employers, as illustrated in Table 6.

Table 6: Job skill deficits posing difficulty for employers

Skills Area	*Percent of Companies*		
	All Industries	*Manufacturing*	*Service*
Reading	16.0%	17.2%	16.0%
Basic mathematics	20.2	17.2	23.4
Written communication	22.7	21.9	24.5
Oral communication	14.7	6.3	21.3
Computer capability	10.4	9.4	11.7
Work readiness*	17.2	12.5	21.3

* Attendance, dress, cooperation, etc.

Source: Lund and McGuire, 1990, p. 11

Currently, Canadian companies are fighting a losing battle as they try to find qualified new workers. As the quality of job applicants declines or as job requirements increase, many of the 626 companies responding to a recent survey said they generally increased their recruiting standards to screen out more of the candidates. Recruitment problems are even more apparent to small businesses, who compete among themselves as well as with the larger companies for talented employees. The Canadian Labour Market and Productivity Centre estimated that 5 percent of the job vacancies in 1988 went unfilled due to a lack of skilled workers ("Workplace Literacy and the Training Connection," *Globe & Mail*, 1990). This is significant, given that the unemployment rate has been as high as 10 percent.

One report mentioned that some 15 percent of people applying for jobs are rejected because they are functionally illiterate

(DesLauriers, 1990). Another report noted that poor written and verbal communication skills now account for the rejection of more entry-level candidates than lack of experience (Towers Perrin and the Hudson Institute, 1991).

Matters will come to a head as the labour pool continues to shrink. All organizations will have to face the possibility of basic skills training, not just manufacturers or those operating in areas of high employment. Indeed, employees may start demanding such training as part of their benefits packages.

> *"Many respondents indicated that labour shortages will become a critical problem for Canadian business in the near term. The shortage of unskilled labour is already critical in a number of areas because of a decline in the number of 16- to 24-year olds. In some plants, the average age of employees is 40 and over, and highly skilled replacements are rare. In this environment, the key words will be attraction and retention"* (Benimadhu, 1989, p. 19).

Some businesses have tried a different solution in that they have simplified the job requirements, particularly in terms of reading and numeracy skills. This is only a short-term solution, however, as reading and computation are transferable skills that are required of almost all Canadian workers. Also, this strategy does not take into account the many marginally literate people already in the workplace. The attainment of transferable skills is essential if workers are to benefit from retraining as job skills change.

The long-term solution is to have employers increase their involvement in skills upgrading. Essentially, business will have

to do more of what it has always done–preparing people to get and keep jobs. Those companies that are not yet planning on implementing basic skills training will be forced to do so when they find that adequately literate and numerate people are not readily available.

"In the increasingly global environment, the Council sees skill training not only as a necessity but also as a sound investment. It benefits both employers and employees. The Council believes that there are significant savings and benefits attached to a better prepared work force, which will make companies more productive and enhance the quality of working life" (*Adjusting to Win: Report of the Advisory Council on Adjustment*,1989, quoted in Prosperity Initiative, *Learning Well . . . Living Well* ,1991, p. 18).

3.2 Who is doing training?

3.21 Very few companies offer remedial training

Canadian companies carry out little formal training, preferring to buy, rather than train, skilled labour (National Literacy Secretariat, *Creating a Learning Culture* ,1990). In the past, this strategy worked well because the universal, publicly-funded educational system was supplying a sufficient number of workers with adequate skills. As a result, the writers of the *Learning Well . . . Living Well* report noted that "Canada's record in employer investment in training is among the worst in the industrialized world" (Prosperity Initiative, 1991, p. ix). As demographics change and immigration policies become more lenient due to family reunification policies, it is time to rethink this strategy.

> Of the 70 percent of Canadian companies in the Conference Board of Canada survey noting "significant problems with illiteracy in their workforce," only one-quarter of them had plans to deal with them, through tuition reimbursement, basic skills training, reassignment, and early retirement (Towers Perrin and the Hudson Institute, 1991, p. 2).

More particularly, few Canadian companies offer literacy or numeracy training. A limited number offer in-house functional literacy programs. More choose to address the problem indirectly by funding volunteer literacy efforts or programs offered through local community colleges. Budgets for remedial education, where they exist, tend to constitute one to five percent of the total training budget (Towers Perrin and the Hudson Institute, 1991).

Training Magazine surveyed American companies and reported that only 11.3 percent of all responding organizations were offering basic skills programs. Smaller organizations were less likely to offer such training than were larger ones (Lee, 1989).

3.22 Which organizations are more likely to offer remedial training?

Based on the American experience, certain companies—including those in the manufacturing, public administration, and transportation/communications industries—will be more likely to offer basic skills training. The wholesale/retail trade industry is the one least likely to offer such training. Company size is a second influencing factor, with the largest companies being three times as likely as the smallest companies to offer basic skills training (Lee, 1989). Finally, certain firms tend to employ

more people lacking basic skills: manufacturing companies, unionized companies, companies with more than 2,500 employees, and companies located in areas experiencing high employment. (Commerce Clearing House et al, 1990).

One reason manufacturers are more involved in basic skills training is due to the need to train workers in statistical process control (SPC) as a means to improve quality. SPC programs require workers to have adequate mathematical skills. A spokesperson for the Automotive Parts Manufacturers' Association of Canada stated that 90 percent of the organization's members were instituting SPC programs, or had already done so (Ritts, 1986).

"Figures compiled by Motorola Inc. show that a North American company pays about $200 (U.S.) to train an hourly worker in statistical process control, a technique for maintaining consistent production. A Japanese company pays just 47 cents because its workers can already read the manual"(Maynard, 1989, p. 90).

Carnevale et al (1990) gave additional reasons why companies may choose to engage in remedial training. They determined that companies with many employees with a specific training need, that have access to expert trainers with available time, and that realize the cost of going outside for training is high, will be more likely to offer remédial training.

3.3 Capacity to undertake training

3.31 Marginal benefits from training

Many employers have stated that they are not interested in

remedial training—they either don't hire functionally illiterate workers or they worry that training such workers would mean losing them shortly thereafter. Some employers hire primarily part-time workers. Having no trouble attracting and no real desire to retain these workers, the employers don't invest heavily in training their "contingency" workforce. In the longer run, when trained workers are not so readily available, it is likely that this expedient strategy will prove costly.

Other employers believe that basic skills training is a societal responsibility that should be addressed—and paid for—through the public school system. They protest the high cost of training people in basic skills, stating that such training may not impact favorably—at least in the short term—on the bottom line. These employers are often the first to complain about inadequately prepared workers, yet are slow to make any real contribution to improving the situation.

Then there is the fact that corporate trainers generally teach specialized skills and so are at a loss when asked to teach functional literacy skills. Finally, employers fall back on the fact that too few employees require basic skills training for there to be scale efficiencies in developing testing or training programs for these workers.

"'We would not know where to start,' said one personnel manager. "We just do not have any experience or skill in this type of training'" (Lund and McGuire, 1990, p. 16).

More companies seem prepared to support community literacy programs, but even this option is constrained due to recessionary times—corporations have less money for the many non-profit societies applying to them for financial aid.

Finally, people who are functionally illiterate tend to have a poor understanding of oral language. This means that it takes a good deal longer before significant advances are seen from training that consists of lectures (Lund and McGuire). More positively, the general experience among adult basic education teachers is that language and numeracy growth is quite rapid when linked to something concrete, such as job preparation.

3.32 Small businesses

> *"Small employers are important trainers because they create so many new jobs and because they tend to draw their employees from populations and industries that most need employer-based training"* (Carnevale et al, 1990, p. 41).

Small businesses employ many Canadians and create many new jobs each year (Beckman et al, 1982). They employ a number of entry-level workers, yet for a number of reasons are generally not involved in training them. One possible reason is that small businesses often cannot afford to release key employees for the number of hours required for the training. Financial considerations, especially cash flow, also play a role—small businesses often cannot afford major training expenditures. Finally, specialized training that would normally be carried out within

large companies cannot be undertaken by small businesses, which lack scale efficiencies in training, as well as expertise.

3.33 Lack of commitment at the top

With tougher times in the eighties, many firms cut staff functions, including human resources. Hardest hit within many human resource departments were training and development budgets. Obviously, these firms would be reluctant to undertake basic skills training in addition to their other responsibilities. So, even when top managers could see a basic skills problem, the general response was to revise recruiting and hiring practices in such a way that standards were raised. Employees lacking basic skills were often fired (Commerce Clearing House et al, 1990).

3.4 How is it being done?

3.41 Who should be trained?

Business spends most of its training budget on those who are easiest to train—their best-educated and most promising employees (Vaughan and Berryman, 1989). The bulk of the workforce does not receive nearly as much training, nor are training budgets generally apportioned in a way to encourage targetting of high-risk groups, including those employees most likely to be affected by changes in skill requirements, those who are functionally illiterate, and those whose first language is neither English or French. Another important target group is supervisors, who benefit from training designed to allow them to more easily recognize those workers who have deficient basic skills.

3.42 Types of training offered

In almost all training offered by business, instructors assume that people can read and write. Indeed, most companies reimburse employees for tuition costs of work-related courses offered by external providers—typical of the traditional approaches preferred by Canadian companies when developing training programs and policies.

Still, some Canadian organizations have begun to offer literacy training. Some of these companies are following the lead of larger American firms, which are further ahead in recognizing and responding to their employees' need for basic skills programs. Those programs that emphasize educational upgrading are typically offered in conjunction with school boards or community colleges. Classes in literacy are sometimes offered in-house, or the employee is given time off to attend external programs, often run by volunteers. Towers Perrin and the Hudson Institute reported that as high as 20 percent of those companies running training programs are considering offering remedial reading, writing, and math. Currently, only 5 percent do so, although another 6 percent are piloting remedial courses. While this is encouraging, it is also important to remember the portion of the total training budget these organizations spend on remedial programs—1 to 5 percent (Towers Perrin and the Hudson Institute, 1991). Much more attention is being paid by human resource departments to managing technological change, even though transferable skills are essential to maintaining the flexibility needed to institute such change.

Training Magazine carried out an industry survey in the United States. One question canvassed companies as to the number of employees receiving basic skills training (Lee, 1989). The average number of participants is shown in Table 7.

Table 7: Average number of participants in basic skills training programs

Training	*Participants*
Reading	63.9
Basic math	63.5
Writing	56.2
English as a second language	32.4

Source: Lee, 1989

The Commerce Clearing House et al (1990), in another American survey, found that companies offering basic skills training generally use classroom settings and an outside trainer. Although some programs were discontinued due to employee resistance, indicated by low enrolments or poor attendance rates, few programs did any follow-up concerning the effectiveness of the training. The researchers also noted the most popular methods of delivering literacy training. These included local educational institutions, tuition assistance, in-house trainers, external contractors, volunteer tutors, and local literacy councils. As mentioned previously, many companies use a combination of external and internal training resources.

3.5 Cost of training

3.51 Who pays?

While the general public pays the costs of general literacy education through the school system, employers have taken on a substantial portion of in-house job-related training costs, including instruction, development of materials, and trainee release time. In general, larger corporations pay for more of the costs of training than do smaller organizations. In many instances, regardless of employer size, employees are called on to contribute their own time or otherwise pay for a portion of training costs. More recently, economic recession has strained organizations' ability to put time and money into development and training.

The Conference Board of Canada recently reported that only one in four companies trains workers. It estimated that annual training expenditures by these firms are $1.5 billion, or $100 per employee each year (Johnston, 1990). It has been estimated that American employers spend between 1 and 2 percent of their payroll on off-the-job training of all kinds, and about six times as much on on-the-job training. The "excellent" companies tend to spend more on off-the-job training; between 3 and 6 percent of payroll (Carnevale et al, 1990). In terms of basic skills training, organizations spend anything from $36,000 every year to nothing at all (Lee, 1989).

The Conference Board estimates that Canadian businesses spend about one-quarter as much on training as is spent by their American counterparts (Johnston, 1990). There is a still larger

differential when one compares the time and money spent by Canadian companies on formal and on-the-job training against that expended by Swedish, German, and Japanese companies.

In terms of recognizing the need for literacy and numeracy training, American companies seem to be about two years ahead of Canadian companies. While less than 10 percent of small companies offer it, almost one in three larger ones is involved in basic skills training. Another third of the largest corporations is considering instituting such training. Overall, those organizations offering remedial education spend $200 per employee (Lee, 1989).

3.52 Quantifiable costs and benefits

One of the outcomes of literacy programs is that they can pay for themselves when they result in improved productivity. The Workplace Education Service in Adelaide (a Department of Employment program in Australia), estimated a return on investment of $1 to $5 for every dollar spent on workplace language and literacy training. (Unfortunately, the researchers did not give the period over which the return was calculated.) Some managers claimed such training created productivity increases of up to 20 percent (WES, *Workplace Education Service*).

The Ontario government found that training jobless illiterate people can lead to their employment and a recouping of the training expense through increased income tax and sales tax receipts (Calamai, 1987).

Other quantifiable benefits that can be achieved through literacy programs include increased product quality or service,

greater flexibility and job knowledge, less resistance to technological change, reduced absenteeism and labour turnover, fewer errors, improved awareness of health and safety issues, and greater motivation and commitment.

3.6 Testing for illiteracy

Few Canadian companies test job applicants or new hires based on basic skills. Those that are involved in this type of testing are generally seeking to eliminate skills-deficient candidates, not to identify them for training purposes.

There are several reasons why so few companies engage in testing for functional literacy. First, few recruiters check to see whether a candidate actually has a high school diploma—it takes too long to verify, nor is it a guarantee of literacy. Second, such testing is costly, particularly if the test is carefully constructed and administered. Third, functional literacy tests measure gross differences in language ability and as a result do not deliver the information needed to choose between two similar applicants. Fourth, there are some concerns with human rights legislation and literacy testing, particularly in the United States (Lund and McGuire, 1990).

Many companies currently rely on simple screening measures to determine functional literacy—a high school diploma, a properly completed application form, or a successful employment record. While reasonably effective, these methods can generally be circumvented by individuals practiced in hiding their illiteracy.

Some organizations have begun to train supervisors in procedures for determining whether or not employees have skills deficiencies. These workers are then offered training in basic skills.

3.7 What works?

Workplace education programs come in a variety of forms and set distinctly different goals, from general literacy attainment to developing employees in order to promote them to particular jobs. The timing of the program, the incentives offered, the materials used, and the instruction provided can all vary from company to company—even within the same industry. One thing that they do have in common is that their initial success depends upon incentives being offered to the employees, whether these be time off for training, promotion, or some form of tuition refund. Later, once employees see a value to the literacy learning, this can become the incentive (Dunn-Rankin and Beil, 1989). A brief description of several literacy training initiatives being undertaken in Canada is noted in Appendix A.

One of the more common scenarios for workplace literacy programs, however, is employees tutoring fellow employees in reading, writing, or mathematics. Often half of the tutoring and learning time is paid for by the company, with learning resources coming from written materials used in the workplace. More information on how to set up a literacy program in the workplace is found in Chapter 6.0.

3.8 Conclusion

Workers are strategic resources. To see bottom-line results, the private sector must begin to invest in workers more heavily. With fewer new entrants to the workforce and increasing international competition, Canadian employers must take a greater role in training the workforce in basic skills, rather than relying on the public sector to educate and train workers. Greater awareness of illiteracy and innumeracy is the first crucial step.

4.0 THE PUBLIC SECTOR AND ILLITERACY

Chapter 4.0 describes the role and some activities of governments, voluntary agencies, and educational institutions in literacy training. These agencies provide resources upon which the business firm can draw for specific assistance and conversely, to which business firms can contribute to address the general problem.

4.1 Government involvement in basic skills training

Functional literacy is an important issue that affects Canadians' economic and social well-being, both of which are generally viewed as prime responsibilities of government. From a purely political viewpoint, this is a good time to address the issue of adult literacy, because:

- Canadians are reasonably aware of the prevalence of illiteracy in their society;
- recent polls show that a majority of Canadians want educational reform to ensure maintenance of their current standard of living; and
- voters are generally supportive of actions taken to improve economic performance.

Literacy is a broad-based issue that might be used to gain public support for the federal government. This would probably require increased expenditures on education, training, and retraining—all of which, ironically, have been cut back in the past few years. Michael Wilson's (Minister of Industry, Science

and Technology and Minister for International Trade) announcements on the Prosperity Initiative indicate that the government realizes the political and practical value of strengthening the links between education, training, and economic health. Not surprisingly, many of the provinces have also begun to study these links.

"The Prime Minister has called for a national debate on education and economic competitiveness to examine key issues, including lifelong learning, preparation of students for the workplace, the need for highly qualified professionals, and continuing education and training" (The Hon. Barbara J. McDougall, then-Minister of Employment & Immigration Canada, recorded in Bloom, 1990, p. 4).

A second reason why government is involved in functional literacy training is that comprehensive solutions require planning, goal setting, and coordination. Currently, three levels of government, educational institutions, volunteer organizations, and businesses are all involved in providing basic skills training. Even at one particular level of government, many different departments will provide funding for literacy. For example, in Ontario, funding comes from four ministries: Skills Development, Education, Corrections, and Universities and Colleges. At the federal level, the Secretary of State, the Solicitor General, and Employment and Immigration all provide funds. Fragmented responsibility has made the issue a low priority for most of those involved, leading to the development of many short term, and sometimes conflicting, "solutions." To try and coordinate these efforts, the federal government has signalled

its desire for a national discussion of priorities and plans by distributing a consultation paper called *Learning Well . . . Living Well*.

Third, illiteracy's regional character indicates the need for a coordinated approach by the different levels of government. Regional programs are required to meet the needs of industry and individuals in different parts of Canada. It is appropriate to include the provincial and territorial governments in this effort, as education—one of their responsibilities under the BNA Act—has been shown to be a prime factor in the attainment of functional literacy.

"In 1975, the 'hazard' index derived by the Economic Council of Canada stood at 119, which indicates that the unemployment rate for the poorly educated was 19 percent above the national level in that year. It stood at 148 in 1989" (Prosperity Secretariat, *Prosperity Through Competitiveness*, 1991, p. 10)

Finally, support of lifelong learning is a global trend among the industrialized countries, with many of them setting clear national goals for achieving a learning culture. The United States offers a good example of this, with the president and state governors setting six national goals for education. The fifth goal is that every adult American be literate (Lund and McGuire, 1990).

4.2 Federal government

Canada, unlike the United States which passed a comprehensive literacy act in 1991, has no legislation directly relating

to functional literacy, nor have Canadian governments been willing to consider basic education to be a constitutional right. The federal government, however, does acknowledge the value of labour force training in a number of different programs.

In the 1980s, federal labour market training was targeted, focussing on dropouts, on people on the fringes of the labour market, on new immigrants, on Aboriginal peoples, and on women (Employment and Immigration Canada, *Annual Report 1990-1991,* 1991 and Prosperity Initiative,*Prosperity Through Competitiveness,* 1991). In another recent trend, federal programs began to favor higher-level training over basic skills training. For example, in 1981, "Ottawa withdrew funding for programs with an academic upgrading component below Grade 8, which was believed to be a minimal entry level to a skills training program" (Fagan, 1991, p. 2). This trend away from basic skills training was supported by the 1985 MacDonald Royal Commission on the Economy. All of these trends meant less government funding for literacy and numeracy training, leaving individuals in need of help to rely either on their own efforts or on the aid of employers or not-for-profit groups.

In the 1990s, the federal government's focus appears to be on the development of partnerships among governments, industry, labour, and educational institutions. Policy makers have determined that this is the only way to achieve substantial increases in the amount of training being undertaken in Canada. These policy makers believe that it is only through the involvement of all groups that the necessary diversity of programs

will be offered. Literacy programs are needed in every community and must cater to the needs of English and French speakers as well as to those of new immigrants. Special programs for children, women, and workers with physical handicaps or learning disabilities are also required. Clearly, identifying and motivating those individuals needing basic skills training will require a diversity of programs, tailored to the special needs of particular groups.

In an effort to increase the amount of training undertaken within Canada, the government published a report in 1991 called *Learning Well . . . Living Well,* in which it suggested 10-year training targets for discussion. These targets include:

- increasing the basic skill levels of all Canadians;
- ensuring that nine out of ten high school students graduate before they are 25;
- encouraging a four-fold increase in the amount of work experience gained by students;
- reducing the number of functionally illiterate adults by half;
- encouraging businesses to spend four times as much as is currently spent on training employees and to create staff development plans covering a majority of their employees (Prosperity Initiative, 1991).

Despite these goals, the federal government acknowledges that the provinces hold the primary responsibility for workforce training. And as a matter of philosophy, the government asserts that employers should sponsor training of their employed workers.

In practice, however, the federal government sponsors a number of initiatives that support a variety of training goals. It acts to develop policy and set trends through selecting target groups and developing exemplary programs. In some ways, the federal government is Canada's "trainer of last resort."

Including provincial transfer payments, the federal government spends about $11 billion on various education and training programs each year. The government has indicated that, while willing to negotiate how this sum is spent, it is unwilling to increase its size. Federal programs relating to basic skill development are described in the following sections.

4.21 The National Literacy Secretariat

In the late 1980s, functional literacy again became an issue with federal politicians, in part due to David Crombie's sponsorship. The National Literacy Secretariat was created within the Department of the Secretary of State in 1986. A small budget was made available in the spring of 1987 for consultation and the development of a potential program. In 1988, it received funding of $110 million over five years, a vast increase over previous federal spending on literacy.

"The initiative is intended to raise general awareness of the problem of illiteracy and make it part of the national public agenda as well as to create a national infrastructure to deal with the problem. Mulroney said, 'We need nothing less than a national effort by the federal government, by the provinces, by business and labour organizations, [and] by the voluntary sector, to address the issue of illiteracy in Canada'" (Cote, 1988, p. 7).

As a federal agency, the National Literacy Secretariat does not get involved in funding literacy training as such; rather, it focuses on literacy awareness and on showing a need for training adult Canadians in basic skills. The secretariat sees literacy as a social participation or citizenship issue. One of its main tasks is to act as an advocate for literacy within government, including tracking the different literacy efforts being taken by different departments, such as the Corrections Branch and Native Affairs.

The National Literacy Secretariat also operates a small grant program, accessible by volunteer and non-profit groups. Money goes to support public awareness, networking and developing partnerships, information gathering and sharing, and applied research. Some project grants have also been awarded to national organizations or institutions. New projects receive priority. The Literacy Secretariat also negotiates on behalf of the federal government on ventures that it jointly funds with the provinces.

4.22 The Stay-in-School initiative

In May 1991, during his Speech from the Throne, Governor General Ray Hnatyshyn said a government priority would be to ensure a strong and healthy educational system in Canada.

Public schooling is one of the most obvious and extensive training initiatives undertaken by governments. And while education is largely a provincial responsibility, the federal government contributes about $9 billion annually to formal education through provincial transfers and university research

grants. It also sponsors several specific programs, including a national Stay-in-School initiative and student scholarships.

The Stay-in-School initiative was announced in 1990 and was to be a five year program administered by Employment and Immigration Canada and the Minister of State for Youth. The federal government has committed almost $300 million to the program in an effort to reduce Canada's 30 percent school dropout rate. (Funding for the initiative basically was re-directed from existing labour market programs.) The primary component of the initiative is an awareness campaign that is designed to galvanize stakeholders, including students, into action. Awareness was raised via the distribution of related reports, videos, and publications, and through advertising and publicity.

While awareness-raising is the current goal of the Stay-in-School initiative, some funding is available for institutions working with at-risk students. Special research projects and the development of co-operative education opportunities are the types of programs that have been funded to date.

4.23 The Correctional Service of Canada

The federal government also sponsors adult basic education or upgrading courses through the Correctional Service of Canada. About half of the people in Canadian jails cannot read, write, or calculate at a grade 9 level of competence. Thus, literacy training for a number of these inmates is a necessary prerequisite to further training. Currently, about 1,500 inmates are

attempting to earn secondary diplomas (Correctional Service Canada, *Academic Education Secondary Levels*, n.d.).

"[I]n looking at applications for conditional release, the National Parole Board will give far more consideration to literacy skills than in the past" (Correctional Service Canada, *Adult Basic Education Program*, n.d.).

4.24 Unemployment insurance and social assistance

Unemployment insurance (UI) and social assistance programs, like most of the federal government's labour market efforts, are primarily intended to replace lost income. However, in 1991, *Bill C-21* was passed, allowing Canadians receiving unemployment insurance or social assistance to upgrade basic skills without suffering any decrease in benefits. Unfortunately, the basic training allowance for those on social assistance appears to be inadequate, as in many cases the allowance is below minimum wage (Employment and Immigration Canada, *Pathways to Success* ,1990).

The relative amounts spent from the unemployment accounts on training in 1988 (2 percent or $255 million) versus income support (almost $11 billion) speak for themselves. Many industrialized countries put much more emphasis on training compared to income support than does Canada (Employment and Immigration Canada, *Success in the Works* , 1989).

4.25 The Canadian Jobs Strategy

The Canadian Jobs Strategy (CJS) is the federal government's primary training mechanism. Administered by Employment and

Immigration Canada (EIC), the CJS program encourages industrial training through spending $1.8 billion annually. It is intended to be a flexible, accessible program, focussing on regional labour market needs and targeting those Canadians who are disadvantaged in the labour market.

Sidebar: The Canadian Jobs Strategy programs relating to training

1. Industrial Adjustment Service
   This cost-sharing program is a way for employers and employees, threatened by major changes, to develop an Industrial Adjustment service agreement. A number of parties may sign the agreement, becoming partners with the federal government.

2. Community Futures
   Community Futures helps communities facing major economic problems for up to five years. One of the program options is training assistance.

3. Job Entry and Re-Entry
   This program sets up cooperative education opportunities for young people just getting into the workforce and women who are re-entering it.

4. Skill Shortages
   Employers seeking to train workers in a skill or job noted on a skill shortages list can apply to this program for training subsidies.

5. Skill Investment
   This program is a way to train workers in skills they will require for continued employment and to survive changes in technology or the economy. The program allows for on- and off-the-job training over one, two, or three years.

6. Innovations
   This option sponsors "new and imaginative ways to improve the operation of the labour market in Canada," generally

on a cost-shared basis (Employment and Immigration Canada, *Working Portraits* , 1990, p. 14).

7. Job Development
   Job Development has a training component aimed at people who have been unemployed for a minimum of half a year. From 4 to 12 months is spent in training, often using a combination of classroom and on-the-job training.

Few components of the CJS program relate directly to basic skills training. One sub-component, the Literacy Corps program, gives grants to non-government and voluntary agencies. The Literacy Corps, aimed at training volunteer tutors to work with young people lacking basic skills, accounted for approximately $1 million of the CJS funding in 1989 (Employment and Immigration Canada, *Pathways to Success* , 1990). A second component, the Job Entry program, allows for short-term, in-class literacy training. There are also several literacy initiatives funded under the Innovations Program, in cooperation with groups such as Laubach Literacy of Canada, Frontier College, and school boards.

The CJS general qualification that training programs be no longer than 52 weeks in duration works against basic skills upgrading, which has generally proven to be a longer-term undertaking.

"The rationale for EIC's position on literacy training has been twofold. First, literacy training alone does not directly lead to labour market participation, and secondly, literacy and basic training are provincial responsibilities" (Employment and Immigration Canada, *Pathways to Success*, 1990, p. 17).

4.26 The Canadian Labour Force Development Strategy

The federal government introduced the Canadian Labour Force Development Strategy (CLFDS) in 1989. The strategy creates a Canadian Labour Force Development Board (CLFDB) that draws its 22 members from labour, business, educational, social action, and Aboriginal groups. The strategy is funded with $1.3 billion from the unemployment insurance program, with some $800 million of this being earmarked for skills training and upgrading—a 50 percent increase in federal expenditures for labour force upgrading (Employment and Immigration Canada, *Annual Report 1990-1991: Partnerships*, 1991). Several of the programs described in the previous section were adjusted or brought into being as a result of the CLFDS:

- training for workers on unemployment insurance ($350 million);
- training for people receiving social assistance ($50 million);
- entry level training, including apprenticeship programs ($100 million);
- Community Futures/Industrial Adjustment Service ($65 million).

Monies were also made available for human resource planning ($65 million) and displaced older workers ($100 million). (Employment and Immigration Canada, *Success in the Works*, 1989).

The CLFDS sought greater targeting of training monies and opportunities for Aboriginals, women, disabled workers, young people, and older workers. It encouraged more input from unions

and businesses as to how the work force should be upgraded through the development of regional or local training plans. It also encouraged training planned along industrial or sectoral lines.

"A total of $230 million is available in the Labour Force Development Strategy to increase training activity by the private sector through co-operative programs. The Government's objective is to stimulate an additional private sector training effort of $1.5 billion a year by 1994. This increase is needed to raise the level of Canadian private sector training to that of the United States" (Employment and Immigration Canada, *Success in the Works*, 1989, p. 5).

The CLFDS also led to the negotiation of multi-year federal-provincial labour force development agreements. The agreements spell out, among other things, the training to be purchased by the federal government from provincial educational institutions.

4.27 Programs for Aboriginal peoples

A number of programs offer training assistance to Aborginals. First, Aboriginals constitute a designated group under the CJS program. Second, the government announced a Canadian Aboriginal Economic Development Strategy in 1989, which includes a skills development component. Third, the Native Internship Program through EIC offers employment opportunities to Aboriginal students. Finally, Indian and Northern Affairs Canada funds efforts to improve human resource development in Indian and Inuit communities. This often includes training in literacy skills.

4.28 Language training for new Canadians

Most of the funding in this area is provided by Employment and Immigration Canada, which purchases blocks of training places from educational institutions. Immigrant serving agencies and some businesses also participate in language training. With higher annual immigration levels of 250,000 individuals planned until 1995, the need for literacy training for immigrants is vitally important. Yet funding for language training, while increased, has been set at a level that does not allow access by all the immigrants requiring training.

The Settlement Language program was developed for immigrants not immediately entering the workforce, particularly women at home with children. Approximately $5 million was spent on this program in 1990-91 (Employment and Immigration Canada, *Annual Report 1990-1991*, 1991). The Language at Work program operates through funding provided by the Canadian Jobs Strategy's Skill Investment program. By paying literacy-related training costs, the program seeks more training for women immigrants entering the workforce. The federal government desires to develop more partnerships with businesses through the Language at Work program, in part because immigrants could make up half of the new workers entering the workforce during the 1990s. Finally, the government sponsors some language training for refugees soon to be granted final clearance to come to Canada (Employment and Immigration Canada, *Backgrounders to the Annual Report to Parliament: Immigration Plan for 1991-1995*, 1990).

4.3 Provincial government

> *"The constitutional proposals recognize explicitly labour market training as an area of exclusive provincial jurisdiction. They also recognize that leadership in the area of skills standards should be exercised jointly by the federal and provincial governments"* (Prosperity Initiative, *Learning Well . . . Living Well*, 1991, p. 25).

About $45 billion is spent in Canada every year on public schooling; another $5 billion is spent on adult education. The provinces pay about $30 billion of these costs. As a percentage of GDP, this is one of the highest expenditures on education in the world (Prosperity Initiative, *Learning Well . . . Living Well*, 1991). Yet many students leave the educational system lacking basic skills or vocational training. Almost one in three will not graduate from high school. These young Canadians are virtually unemployable and are difficult to train. Unfortunately, as yet there are no concrete studies as to whether the federal government's Stay-in-School initiative has had any effect on the dropout rate.

The provinces seem to have focused on the need for skill development and upgrading in recent years. Several, including Nova Scotia and Manitoba, have integrated their departments of education and training in an effort to provide a more cohesive approach to workforce development. And in 1989, the provinces completed a report called *Partners For People*, in which they introduced a strategy built on the development of partnerships among federal and provincial governments and the private sector.

Many provincial literacy efforts are aimed at children still in school. The Council of Ministers of Education (CMEC), for instance, is creating the School Achievement Indicators Program (SAIP), a national standards and testing system that will measure reading and writing skills and allow for comparison across provincial student populations. For participating provinces, the SAIP will allow evaluation of provincial efforts to impart basic skills to school-aged children. The departments of education also train immigrant children in one of Canada's official languages. This is a significant expenditure, particularly in British Columbia (Vancouver) and Ontario (Toronto).

In terms of adult literacy, provincial departments of education help fund community and vocational colleges. These institutions have become important providers of literacy programs to employers and to individuals, offering a wide range of programs. As well, these institutions know most about teaching adults, being the primary developers of adult basic education programs.

In addition to these efforts, various provinces have put in place a number of skills-based programs. For instance, the government of Alberta has created a program called Skills Alberta to aid private businesses and non-profit agencies. It offers consultation services to identify training needs and develop a training plan and, in some cases, offers incentives in the form of reimbursement of a percentage of the direct training costs. The intent is to develop training expertise among smaller organizations and to foster cooperation between employers with

similar training needs. Among other things, emphasis is placed on meeting local training needs and on workplace literacy programs. For individual workers and students, the Alberta Career Development and Employment funds the Career Information Hotline, a toll-free information and referral service. Part of its function is to supply information on educational programs and funding, and on job creation and training programs.

In Ontario, there is more sustained and visible support for skills training. For instance, a Community and Workplace Literacy Branch is found within the Ontario Ministry of Education. At least two programs have been developed to aid literacy training: the Workplace Literacy Incentive Grants Program and the Labour Adjustment Initiative, in which both employed and unemployed workers are targeted. Individuals can access the Independent Learning Centre operated by the Ministry of Education to upgrade high-school credits at no charge. The Ministry of Northern Development and Mines has also contributed to creating literacy programs in northern Ontario.

These are a sampling of the programs aimed at improving functional literacy skills in the workforces in Alberta and Ontario. Many other unique programs exist in the other provinces and territories.

4.4 Local initiatives

Some communities have established development committees whose mandate incorporates training. Many literacy programs are

coordinated and offered by community-based providers, many of which cooperate among themselves.

Of course, local school boards can be major providers of adult education programs or courses. Indeed, a number of school boards and community colleges offer a wide variety of functional skills training, including workplace literacy programs, vocational training courses, adult upgrading, and English as a second language programs.

Finally, some literacy programs, such as those offered through unions, are also community- or plant-based. One example of this is the Basic Education for Skills Training (BEST) program, a tutoring program coordinated through the Ontario Federation of Labour.

5.0 PARTNERSHIPS

This chapter builds on Chapter 4.0, being concerned with partnerships between government and other institutions and business.

5.1 The place of partnerships in literacy solutions

Global competition and instant communications are fostering an increased number of cooperative efforts between governments, regions, businesses, and agencies. Many of the actions being taken to counter illiteracy are sponsored by coalitions with members from many sectors of Canadian society. One reason for the proliferation of these types of solutions is the understanding of adult illiteracy as a broad, wide-ranging problem that can only be solved through a partnership of public and private interests.

"Governments cannot solve this problem [lack of skills]—at least not without the express support and involvement of all sectors of the Canadian public; in other words, not without consensus. Our schools, our training institutions, cannot solve the skills problem alone. Their efforts must be fully supported by an understanding—and concerned—Canadian public" (Valcourt, 1991, p. 18).

5.2 The federal government

As mentioned in Chapter 4.0, one of the functions of the National Literacy Secretariat is to encourage the formation of literacy partnerships, the intent of which is to create awareness, foster research, develop new learning materials, and encourage

the proliferation of literacy programs. The Literacy Secretariat also works with other government departments. For example, it works with Labour Canada to foster partnerships among businesses and unions and to encourage workplace literacy programs.

The recent Stay-in-School initiative is another program used by the federal government to create partnerships for literacy. This initiative is more a preventive measure, as students completing high school tend to be functionally literate. Many of the programs sponsored by Employment and Immigration Canada (EIC) create partnerships between training agencies and businesses. In addition, key partnerships are being set up between EIC and Aboriginal groups interested in developing human resource plans for their communities. Other federal agencies work together to promote literacy, including the National Library of Canada, the Canadian Broadcasting Corporation, and the Canadian Government Publishing Centre.

The federal government is also defining its training responsibilities in relationship to those of the provincial and territorial governments. While the federal government believes that the provincial and territorial governments should be primarily responsible for training efforts, EIC recently defined ways that the two levels of government might work together in the area of labour force development:

- by negotiating a specific division of labour between the two levels of government regarding labour force training;
- by eliminating duplication of effort;

- by encouraging the private sector to plan, design, and deliver programs;
- by developing a commitment to skills training and upgrading at all levels in Canadian society (Employment and Immigration Canada. *Annual Report 1990-1991,* 1991).

5.3 Provincial governments

Governments at the provincial and territorial level are committed to developing partnership solutions to the problem of functional illiteracy. Manitoba, for example, recently established a Skills Training Advisory Committee to catalogue and review training programs undertaken by a variety of labour market participants. It seeks to improve the efficiency of these programs, many of which operate with financial aid from the provincial government (*Partners in Skills Development,* 1990).

Another example is provided by Ontario's Ministry of Skills Development. It allocates federal and provincial funds to workplace literacy projects, helping to pay for external trainers and for appropriate training materials (Davison, 1990).

"In August 1989, the Prime Minister indicated the need for a comprehensive review of the way in which we help Canadian citizens acquire skills and knowledge.... [T]he premiers responded positively with an agreement to set up a task force to review human resource development in Canada, including schools and preschools, colleges and universities, school-to-work transitions such as apprenticeships, and the many forms of adult learning" (Prosperity Initiative, *Learning Well . . . Living Well,* 1991, p. xii).

5.4 The Canadian Labour Force Development Strategy

The driving force behind the 1989 announcement of the Canadian Labour Force Development Strategy (CLFDS) was the creation of partnerships between governments, labour, industry, social action groups, and training institutions. Federal funding brought representatives from each of these sectors together to form seven task forces to consult on different aspects of the issue of labour force training. One outcome of the consultative process was *Bill C-21*, which created the private sector Canadian Labour Force Development Board (CLFDB).

"The new Canadian Labour Force Development Board is an excellent model of the type of partnerships required. It brings together business, labour, social action groups and training providers and will play a major role in forging a consensus on training issues, particularly between business and labour, leading to more workplace training"(Prosperity Initiative, *Learning Well . . . Living Well*,1991, p. xii).

The mandate of the national board is to set training priorities, develop skills training standards (including inter-provincial certification), and help plan federal expenditures on training. Government training expenditures will thus reflect consensus from all sectors of the economy.

While funded through EIC, the CLFDB will have complete independence. The 22 board members will be chosen by relevant constituent groups; the government member has ex officio status. Decisions are to be made by consensus. The federal government has committed to being guided by the board, although it does not plan to give the board legislative power, at least at first.

One of the CLFDB members will also sit on the board responsible for developing strategies for Aboriginal training. This will allow communication and cooperative planning between Aboriginal and non-Aboriginal communities.

The CLFDS also sets out a plan for establishing anywhere from 60 to 75 labour market boards by 1994, responsible for skills training at the regional level. They would involve local labour market leaders who would collect regional labour market information, assess regional training needs, develop appropriate plans, and commit any federal training funds that are made available (Employment and Immigration Canada, *Annual Report 1990-91* and *Canadian Labour Force Development Board*, both 1991).

The federal plan also sees a role for provincial and territorial boards, set up by their respective governments. These boards could analyze the efforts of the sub-regional boards and give advice about needed adjustments.

The CLFDS has several tangible employer-related goals:

- to double the investment of employers in "*relevant* training and skills development by 1994,"
- to see more entry-level training being provided by employers, and;
- to increase employer participation in co-operative education at the secondary level (Bloom, 1990, p. 4).

5.5 Community colleges

It is expected that the Canadian Labour Force Development Strategy will lead to more funds being transferred to community

colleges for skills training. While community colleges already function as a major source of skills training and upgrading courses through full-time programs, extension courses, and custom-developed workplace programs, they need to develop still more training expertise, better resource materials, and more flexible, tested curricula. Some community colleges have developed partnerships that they hope will help them with these tasks. A representative sampling is described below.

5.51 Frontier College

Frontier College in Toronto is known for being one of the first organizations to promote literacy training. It recently received money from the National Literacy Secretariat and Employment and Immigration Canada (Innovations program) for two literacy projects. The first is the creation of industry-specific literacy-in-the-workplace training packages. They will teach basic literacy, literacy upgrading, English as a second language (ESL), and preparation for technology (McDougall,1988). The second project is a "Beat the Street" program for street kids in two western Canadian cities. The program focuses on teaching functional literacy and life and work skills to Aboriginal youths (National Literacy Secretariat, *Partners in Literacy*, 1990).

5.52 Humber College

Humber College has worked for several years with the Labour Council of Metropolitan Toronto to provide English classes in the workplace, primarily for women who have not previously taken

formal English classes. The employer provides space and usually pays the trainee for half of the time spent in training sessions (List, 1988).

In addition, several smaller companies have worked to build a training facility at Humber College, with funding from the college and the government of Ontario. Opening in 1992, employees will learn basic literacy skills and be trained in the use of computers. Employers believe that the cost of training the workers will be less than the cost of replacing them (Eberlee, 1991).

5.53 Keyano College

Syncrude Petroleum approached Keyano College in Fort McMurray to develop a reading comprehension program for 150 of its 600 supervisors. The resulting course, Effective Reading In Context (ERIC), is considered one of the best workplace literacy programs in Canada. Its success has encouraged the company to begin developing further units on writing and numeracy. Syncrude has offered to make its ERIC program available to other firms, free of charge (Howes, 1992).

5.6 Labour

Many unions and employee associations have begun to encourage members to take literacy training. A number of them track available programs and make this information known to members as needed. Some unions have made it a priority to have basic education courses included in their contracts.

Some of the larger Canadian unions have gone still further, developing their own workplace literacy programs and training literacy instructors. The Ontario Federation of Labour developed its BEST (Basic Education and Skills Training) program in 1988 that to date has been used in 130 workplaces. The Canadian Labour Congress has developed a similar program that it is piloting in Atlantic Canada, one of the regions in Canada where literacy training is most desperately needed. And the United Auto Workers of Canada have developed a pilot literacy program that is supported by General Motors (Allan, 1991).

5.7 Business

Business acknowledges the need for skills training. At least one industry has developed a training council: the Automotive Parts Sectoral Training Council will be developing and implementing industry-specific curricula and training programs (Prosperity Secretariat, *Prosperity Through Competitiveness*,1991).

Operating on a broader level still, industry created the Business Task Force on Literacy in 1990. Now replaced by ABC Canada, a private-sector literacy foundation, the organization exists to steer corporate donations to literacy organizations.

At the corporate level, many individual firms have linked up with literacy groups to build awareness of functional illiteracy or to sponsor particular activities or programs. Some of these cooperative endeavors are noted in Chapter 6.0. Many companies have become even more involved, setting up skills upgrading programs in conjunction with volunteer literacy groups,

local school boards, community colleges, or business consortia.

Some companies have developed yet another answer to the problem of functional illiteracy: they have begun to contact future workers while they are still in school, through business-school partnerships or work experience programs. Indeed, Syncrude has begun to pre-select workers through work education programs run in cooperation with schools in Fort McMurray. Recently, too, the company has started to apprentice students and guarantee jobs upon completion of their skilled trades apprenticeships. Even with these and many other innovative new partnerships between business and education, corporations play much less of a role in education in Canada than is done in many other countries.

"Business is one of the major stakeholders in education. It depends on the graduates of the education system for its workers. It has the resources and expertise to help change the system in co-operation with other stakeholders" (Bloom, 1990, p. 1).

5.8 Schools

As noted above, one approach to improving Canada's literacy performance is for business to start working with young people who are still in school. The goals of business-school partnerships are to show students how important it is that they gain the ability to learn, to give them firsthand experience with business practices and help prepare them for the workplace, and to encourage lifelong learning. Corporations also provide resources to schools to enable them to do more with those students who need

additional time, customized materials, or special equipment (Gibb-Clark, 1991).

There are numerous indicators of the importance of partnerships between businesses and schools. One such indicator was the creation by the Conference Board of Canada of the National Business and Education Centre. The role of the Centre is to foster educational partnerships. Another indicator comes from a recent study of larger Canadian companies that revealed that close to 50 percent were working with school boards or postsecondary institutions (Gibb-Clark, 1991). Yet another indicator can be seen in a listing of workplace-education partnership programs in Winnipeg during 1991-92: an analysis of the inventory showed that there were 1700 partners (schools and businesses) taking part in 2300 different partnerships.

Corporations are beginning to get involved in other aspects of the educational system as well. Some, for example, are lobbying the federal government to develop a national curriculum and to institute a longer school year. This is somewhat complicated in that Canada does not have a national office of education as the BNA Act gives the responsibility for education to the provinces.

This corporate lobby is already affecting provincial curricular content. For example, the Alberta Chamber of Resources recently participated in the revision of Alberta Education's high school science and mathematics curricula. A number of other businesses have lobbied for departments of education to develop updated vocational curricula. Again, this has led to results in Alberta, where the provincial ministry of education has just

introduced a revised vocational curricula at the secondary level, called Career and Technology Studies. The province hopes that academic and non-academic students alike will participate in the new program, learning job-related skills and gaining work experience.

Other methods of easing the school-to-work transition can be seen, including more and better career counselling, more apprenticeship and cooperative education programs, and closer links between schools and employers.

5.9 Agencies sponsoring joint literacy programs

There are numerous volunteer groups that are involved in literacy training. Many cooperate with one another; many work with governments to provide literacy services. Examples of volunteer agencies include YMCA Canada, the Salvation Army, the National Youth in Care Network, the John Howard Society of Canada, and One Voice-The Canadian Seniors Network.

One relative newcomer to the literacy scene is YES Canada, a non-profit organization that was founded in 1987 by business executives. It offers a 12-week training course for young adults, generally dropouts, in four urban centres: Toronto, Vancouver, Winnipeg, and St. Catharines, Ontario. The organization raises over $1 million annually in corporate donations and has developed a network of some 500 employers willing to interview graduates of the program. YES Canada has trained well over 1000 young people, aged 16 to 24 (Maynard, 1989).

Laubach Literacy of Canada, on the other hand, is a non-profit organization that has been operating for many years. It is currently developing a basic skills training package for the workplace, with funding from the Innovations program of the Canadian Jobs Strategy.

The Canadian Jobs Strategyalso funds the Ontario Network of Employment Skills Training Projects (ONESTEP), a provincial umbrella organization. ONESTEP's membership consists of 85 community-based groups responsible for running some 200 training programs. The groups offer employment skills training for people with serious employment disadvantages, including ex-offenders, the elderly, youths, displaced workers, and new immigrants. ONESTEP provides information and a resource centre, and also acts as an advocate for member groups.

These are only a few of the agencies offering basic skills training in Canada. They are described here as examples of the types of literacy providers that exist in Canada and their diversity in terms of target audiences, program delivery, and goals.

6.0 RECOMMENDATIONS

This chapter moves to the micro level, providing a set of recommendations and resources to assist individual firms to identify problems of literacy in the workplace and to develop programs to address these issues.

6.1 Business must participate in basic skills training

Statistics Canada classifies 38 percent of Canadians as having trouble reading everyday material. Many of these individuals are in the workforce. Right now, little training with respect to literacy is provided by business to the vast majority of employed workers. Nor are these individuals eligible for training assistance from government programs, as are unemployed people and job seekers. For a large number of Canadians with inadequate basic skills, literacy training is required if they are to learn safety techniques, become promotable, or adapt to new technology or other productivity improvements.

The economy would benefit from more basic skills training in the workplace. Such programs represent an effective way of reaching that vast majority of functionally illiterate people who will not enrol for upgrading of their own volition. Finally, basic skills programs in the workplace tend to be customized training meeting specific training needs and matching a wide range of organizational cultures.

Literacy programs tied to the workplace have much to offer to both employees and employers. Many literacy researchers,

including Sticht (1987), Carnevale (1988), and Rostow and Zager (1988), note that context or job-related training is most successful in developing and retaining higher levels of literacy and numeracy. As Fagan (1991) wrote:

> Sticht et al (1987) reported that literacy programs integrated with job development resulted in gains in job-related reading, two to three times the gains made in general literacy programs. . . . However, the opposite was not true: participation in general literacy programs resulted in almost no improvement in job-related reading (p. 4).

One reason for this is that job-related training has an active component that aids learning and retention of new abilities. Also, workers are highly motivated learners. They see the need to upgrade skills and the rewards – greater job security, promotion, more pay, higher self-esteem – for doing so. Finally, the program is offered in the workplace, vastly different from a school environment, a place of past failures. (See Appendix B for a list of useful resources, including *How to Gather and Develop Job Specific Literacy Materials for Basic Skills Instruction,* by Drew and Mikulecky, 1988.)

Employers obviously see the value of a more flexible, productive workforce and increased loyalty to the company. Paradoxically, as Harvey (1980) noted, those companies offering basic skills training often find it easier to attract skilled workers. "In general, our findings suggest that training firms have a greater degree of control over their skilled labour supply and in general perceive training as an effective strategy for

meeting their manpower requirements" (p. 60). Training employees in basic skills as they learn company policies and equipment operation can also decrease the costs associated with new hires. Lastly, with long-term employees, and often even with new employees, companies generally find that remedial education is more cost-effective than termination and the hiring of replacements (Fields, Hull, and Sechler, 1987).

Companies interested in offering basic skills training are in the fortunate position of being able to learn from training programs that have been developed, sometimes at great cost, by companies such as Onan, Motorola, Ford, Polaroid, Syncrude, and Aetna (Howes, 1992). (Listed in Appendix B are a number of useful resources for those wishing to read more about setting up a workplace literacy program.)

If tens of thousands of workers are to be trained in basic skills, companies in all sectors and of all sizes must become much more active in workplace training. Right now, only a small number of Canadian firms are involved in workforce training and fewer still offer basic skills programs, despite changing demographic and competitive conditions. (See Appendix A for a description of several successful Canadian programs.) Even those employers who are still not convinced of the need for full-blown workplace literacy programs should consider participating in the literacy movement.

The following sidebar notes a variety of ways companies can take on a lesser role in supporting literacy training, while the remainder of this chapter gives practical suggestions for those

companies wanting to take on a more active role and develop a workplace literacy program.

Sidebar: Cooperative action between the private sector and the literacy movement

Here are 12 ways that business can support non-profit agencies to create a more literate Canadian society. While all corporate actions that foster literacy should be applauded and encouraged, they should be complementary to vastly increased basic skills training undertaken by the business community.

- Some organizations endorse or join regional or national literacy organizations and encourage their employees to join.
- Some corporations assist non-profit literacy groups in fundraising or in lobbying government.
- A number of companies donate products, cash, materials, or facilities to literacy groups.
- Some businesses lend literacy groups expertise through donations of employee time.
- Many top managers participate in literacy events such as read-ins or business-literacy forums. Others talk about literacy issues in public addresses and ensure that literacy is discussed in internal documents such as employee newsletters.
- Corporations sometimes agree upon a literacy policy and/or set up a literacy committee.
- Many companies have instituted plain language policies.
- Some management teams and unions are cooperating with one another on literacy issues and/or in improving provisions for adult education in collective agreements.
- Industry has at times conducted research on literacy issues and made the results public.
- Some companies display literacy materials in their workplaces.
- Corporations have helped fund literacy information libraries and hot-lines.
- The communications branches of larger businesses have published materials promoting the cause of literacy.

Note: Some of these points were raised in an appendix of a report by the Canadian Business Task Force on Literacy (*Measuring the Costs of Illiteracy in Canada*,1988).

6.2 Carry out an organizational needs analysis

It is standard practice to assess corporate training needs using a variety of information gathering techniques. Generally, a literacy audit is accomplished by confidentially interviewing individuals and groups at different levels in the organization, by observing individuals at work, and by reviewing samples of the company's written documents and forms. When conducting the literacy audit, factors such as corporate strategy, growth plans, promotion strategy, training policies, existence of a union or workers' association, changes in the market or the competition, the nature of the workplace, and degree of technological change must be taken into account. (See Appendices C and D for a written employee questionnaire and the interview questions used to conduct literacy audits in several Canadian and American organizations.) The results of the literacy audit are then used to determine whether literacy and numeracy training should be undertaken, and the appropriate target populations for such training.

When there is a need for literacy training, it is useful to develop a list of job tasks undertaken by those departments or individuals, noting what constitutes satisfactory performance in terms of outcomes and time taken. These tasks should then be broken down further in terms of the underlying literacy or numeracy skills that they require. This is the information needed to revise job descriptions; update hiring qualifications; or deliver needed

training, whether it be used to help design an in-house basic skills curriculum or to help choose an external trainer. By focusing on these skills—or "building blocks"—a training program can match basic skill training with technical training. In this way, an employee's transferability and promotability after training can be maximized.

6.3 Build management and worker support

The next step is to create support for basic skills training at all levels of the organization by developing coalitions or partnerships. Before a formal proposal is made to employees, the need for basic skills should be explained to both management and workers. Objectives of the training should be set in an open process and clearly communicated to all groups within the company.

One way to develop support for the basic skills training is to set up an advisory committee, with influential members from the following constituencies: top management, middle management, human resources, trainers, supervisors, union representatives, and workers. Each group should be encouraged to contribute something to the final program, such as administrative support, provision of facilities, expertise in curriculum or materials development, or paid and unpaid learning time. The belief that it is more effective to develop experienced and loyal workers than to terminate them and replace them with new workers should be fostered at all levels. Companies where training is a part of the organizational culture will have more success in making the advisory committee work.

Obviously, the financial and moral support of top management is crucial, fostering the types of cooperation that are required for success and making the point that employees are a strategic resource. Some employers worry that such training might lead to an increase in turnover as better skilled employees find other jobs. Yet often the reverse is true and turnover decreases; employees are happier and have more loyalty toward firms that offer training opportunities. Or a company may consider requesting its workers commit to a certain term of employment after the training program ends.

Union support is also important, yet can be difficult to achieve if members believe that discovery of functional illiteracy will lead to dismissal. As a result, it is crucial that unions understand the value of literacy education in terms of increasing job security and member flexibility. Indeed, some of the largest unions have developed their own programs: the Saskatchewan Federation of Labour developed WEST – Workplace Education for Skills Training; the Ontario Federation of Labour has the BEST program; and the Canadian Labour Congress plans an Atlantic Canada program (Kapel, 1990). Other unions have placed greater emphasis on adult education provisions in collective agreements. Unionized or not, it is important that all employees be reassured about job security and program confidentiality whenever a basic skills program is being developed.

The program itself must be developed to suit a particular organization, with its unique needs and culture. Getting input

from learners, from program planning until its completion, will help in tailoring the training appropriately.

One universal reality, however, is the stigma trainees attach to the terms "illiteracy" and "illiterates." Preferred ways to refer to literacy and numeracy training programs are to call them "basic skills training," "skills upgrading," " math program," or "improving reading and writing skills."

6.4 Develop a training action plan

Management and workers (or their union) should work together on a training program that will help the corporation meet its strategic goals. The type of program offered will depend largely on the target population(s). For example, workers who are learning English or French as a second language will need a different program than workers who, while schooled in Canada, lack reading, writing, and mathematical literacy.

Planners should rely on the information provided by the literacy audit when putting the program together. This, coupled with an analysis of the organization's resources and culture, should determine the direction of the action plan. For example, a larger company with significant problems with functionally illiterate employees may already be heavily committed to training and will be more likely to offer an in-house program. Smaller companies may well seek other solutions, from joining a training consortium to referring employees to community college or school board programs.

A number of factors must be considered when developing the

action plan. Sandra Kerka (1990) of the Center on Education and Training for Employment proposes that companies consider at least the following items:

> The action plan should tie goals to incentives for participation (for example, paid release time, potential promotions). A secure, unthreatening environment provided for instruction, at the worksite if possible, should avoid association with traditional schooling. The program should be presented as part of regular training, with a neutral name to minimize the stigma attached to illiteracy. Other considerations are whether the program will be open ended or of fixed duration; whether participation will be voluntary, mandatory, or referred; and whether costs will be borne by the employer, the employee on or off work time, or in combination. Many programs have continuous offerings or flexible scheduling to accommodate shift workers' hours. Increased numbers of women, minorities, and immigrants in the labour force mean that attention must be paid to such factors as child care and English as a second language in order to eliminate barriers to full and effective participation. (p. 2)

Once prepared, the action plan must be approved by both management and workers or their union.

6.5 Program implementation

For many smaller organizations, comprehensive programs are generally not viable due to limited training funds and expertise. In-house training programs are usually limited to one-to-one tutoring, backed with advice from a community literacy provider. Companies in this position should also consider the varied program offerings of non-profit associations, community colleges, technical institutes, school boards, universities, libraries,

industry associations, chambers of commerce, for-profit training consultants, and larger local employers. A consortia of businesses or unions with similar training needs is also a possibility for companies lacking the resources to put together their own programs. (See Appendix E for a listing of some key literacy and upgrading programs available in Edmonton.)

Those organizations considering operating an in-house literacy program should contact other companies that have developed programs to meet similar needs. (Some programs are described in Appendix A. A more complete listing of corporations offering literacy programming is available from ABC Canada.) Another option would be to contact training specialists or advisors within the provincial government programs, such as those found within Alberta's Career Development and Employment Branch. A third idea would be to attend one of Frontier College's two-day workshops in Toronto on how to develop workplace literacy programs.

If neither internal nor external training programs are viable for some reason, companies should consider implementing a non-training solution. Written materials could be revised to minimize or simplify reading and writing requirements. Policies could be changed; for example, to centralize report writing, or to allow oral reports. Supervisors could be trained in how to write in "plain language," using clear organizational structures and simple vocabulary. Hiring standards could be upgraded or redesigned (Carnevale, Gainer, and Meltzer, 1988). It is possible, too, that technological solutions to inadequate

reading, writing, or mathematical skills will become more widely available, such as word processing programs that write what is spoken into a computer terminal's microphone.

6.51 Selecting a trainer

When implementing an in-house program or choosing an external one, there are many factors on which to evaluate the teaching staff. A broad range of elements are noted in the following sidebar.

Sidebar: Trainer Requirements

The appropriate facilitator or trainer:

- is proficient in the language of instruction;
- has sufficient time to carry out the training program, including follow-up;
- is experienced in teaching reading, writing, and mathematics to adults;
- understands the work being done by trainees and is able to break jobs down into component tasks;
- knows/understands the community, industry, or organization;
- maintains high professional standards;
- has good organizational skills;
- has good people skills;
- has strong communication skills: is able to make explanations clearly and simply and to perform required demonstrations;
- is able to set clear training objectives;
- is able to diagnose trainees' needs without over-emphasizing testing and grades;
- believes in positive and frequent feedback
- proposes client-centred, adult-to-adult instruction;
- is comfortable with materials and curricula that are not school-based;
- is willing to consider individualized instruction so that workers can learn at different paces;
- is sensitive to employer needs in terms of curriculum design;

- is sensitive to cultural differences in the training population.

Note: Points were drawn from White and Hoddinott (1991), Alberta Career Development and Employment (n.d.), and Fields, Hull, and Sechler (1987).

The choice of an appropriate training method or methods will of course depend on corporate needs and resources. Individualized training allows for learner-centred programs while group training is faster, less costly, and allows peer interaction. On-the-job training is trainer-intensive but ensures the trainee's active involvement; classroom training is more costly but there are fewer distractions and interruptions. The final decision is usually based on the number of employees to be trained, their jobs, and the company's resources (Alberta Career Development and Employment, n.d.).

6.52 Developing a curriculum

Once an instructor has been selected, those companies planning an in-house program should work with the instructor to develop the curriculum. It should focus on desired outcomes and encourage instruction through functional context. Tasks should be broken down into the skills that are needed to perform them well and the curriculum designed to teach these underlying transferable skills. Tying training to job requirements keeps motivation high as employees and supervisors can see its value. It also ensures that the learning is immediately reinforced, improving retention. Finally, the applied approach ensures that

the employer's performance needs are met, making it easier to justify the cost of literacy training. It should be noted, however, that a "functional" curriculum must be revised whenever jobs and training needs change.

Kerka (1990) makes a number of important points regarding curriculum development:

> In designing, developing, and implementing curriculum, use eclectic, individualized techniques and organize content by job tasks, building on employees' job knowledge. Include problems and simulations of actual job situations, and use actual work materials as texts. Let employees work together and learn from each other. Avoid taking a 'deficit' perspective; use experiences workers bring to learning. In teaching reading, include reading-to-do skills such as following directions as well as reading-to-learn skills that will help employees benefit from further training. Because on-the-job reading emphasizes reading only what is needed, teach sorting and prioritizing skills. (p. 2)

The curriculum must encourage active teaching and learning and the use of a wide variety of learning resources. It must acknowledge the capacity of adults of all ages to learn, accommodate the fact that adults learn best what is important to them, remember that they generally wish to be treated as adults, and take note that adults are time-conscious learners. The curriculum should also be set so that employees can work with and learn from one another while meeting individual needs, and to allow each trainee to proceed at a comfortable pace (Imel, 1988).

A curriculum for individuals learning English or French must allow language learning at the same time that job-specific

instruction occurs. Whenever necessary, instructors should use the students' first language to ensure their steady progress in job training. Information should be taught at a slower pace, one idea at a time. Lectures should be short and include visuals or demonstrations whenever possible. Learning resources should be strictly controlled in terms of reading level, vocabulary, and amount of detail. Bilingual definitions of key terms should be provided. Tests should concentrate on job performance rather than language competence (Harrison, n.d.).

Once the goals and underlying philosophy of the curriculum are determined, it is time to develop the course outline, write lesson plans, and prepare high-quality, relevant instructional resources. The lesson plans should provide at least six hours of instruction each week. If the program is long-term, at least 40 weeks of instruction should be provided each year (White and Hoddinott, 1991, p. 24). "Instructional resources" should be defined broadly, taking into account written material in use within the organization, demonstrations, videos, field trips, computers, discussions, lectures, and guest speakers (White and Hoddinott, 1991). Material must be of interest to adults and be screened for sexist or racist content. While the "higher-tech" forms of media, such as computers and video, allow for individualized instruction and pacing, it is important to remember that technology does change, involves some cost, requires certain expertise, and may not offer the required level of instruction (Kerka, 1990).

6.53 Facilities and finances

The selection of facilities for a literacy program is an important variable in its overall success. In many cases, organizations decide to train on-site because they have chosen a functional context curriculum and because a classroom environment is unappealing for their literacy learners. Another option is to use the training space that is used for non-literacy programs so as not to stigmatize illiterate workers. The choice of facility must also take into account the number of employees to be trained, funding and time available, and any preferences held by the instructor. The space chosen should be well equipped, pleasant, safe, and accessible. When participants are shift workers, flexibility in the scheduling of classes is particularly important. One solution is to offer classes in two-hour blocks before or after a shift so that people from both shifts can attend (Fields, Hull, and Sechler, 1987).

Next, an accurate budget must be prepared. The Movement for Canadian Literacy has recommended that $9 to $11 per instructional hour per student be used (White and Hoddinott, 1991). Monies must also be allocated each year for curriculum revision and for renewing materials and equipment. However the figures are calculated, they must at least cover materials and facility cost, instruction fees, employee wages, and employee release time.

6.54 Recruiting and retaining students

With programs and/or instructors selected, it is time to get employees in need of instruction to sign up. Methods of attracting

workers to volunteer for basic skills programs include making verbal announcements as well as written ones, letting employees understand that their jobs are not at risk, ensuring that training records are kept confidential (perhaps even from supervisors), and offering valued incentives such as promotion, paid tuition, and/or release time. (Appendix F gives more specific suggestions as to recruitment techniques.) It is important that the program not be restricted to new hires. Whether the program is voluntary or involuntary, its eventual success will rely on clear communication of the benefits to employees and on their overall commitment to the program. This is facilitated by careful attention to employee concerns and needs in the assessment and support-building phases.

An active recruiting campaign should allow for others to identify trainees in addition to self-selection, as not many employees will self-report literacy deficits. In most cases, only 10 percent of employers become aware of literacy deficits as a result of self-reporting by employees. Most learn from indirect proofs (Deslauriers, 1990). Ways to increase enrolment thus include making personnel specialists or union representatives available to employees to talk informally about the training program, instructing supervisors in observation and diagnosis techniques, and paying close attention to the results of the literacy audit. Some corporations carry out anonymous testing for literacy skills so as to at least have an estimate of the number of employees in need.

One reason why workplace literacy programs are so badly needed is because they are able to build in several factors that most strongly motivate learners: employer backing; the urging of others or word-of-mouth recommendations of the program; economic need; the hope or expectation that completion of the program will lead to job advancement; possibility of educational advancement; and the desire for self-improvement (Thomas, 1990).

A functional literacy program will attract many more people if the word "literacy" is kept out of the name. It is for this reason that many literacy programs are called skills upgrading classes, playing on the fact that there is no stigma attached to learning job skills, while there is to being illiterate. This also addresses employees' concern that admitting to functional illiteracy will affect their promotability and future earning potential.

Once a program is up and running, retention becomes a consideration. The Southam survey led to the discovery that "only 10 per cent of the low-literate population would consider taking literacy classes, and that dropout rates of 50 per cent had been recorded" (Thomas, 1990, p. 1). Unfortunately, there are many reasons for learner reluctance. Effective programs and materials are difficult to develop and sustain for an extended period. Reminders of classroom schooling and earlier failures can lead to learner resistance. Access problems, ranging from transportation difficulties to spousal opposition to the program, will lead to people dropping out of a program. Personal problems, including depression and alcoholism, can get in the way of

learning. Some participants may lack motivation, being satisfied with their current position and lifestyle, or they may hold a second job that precludes their participation in training outside of work hours (Dunn-Rankin and Beil, 1989). Appendix G gives a more detailed list of reasons why low-literate adults tend not to participate in literacy programs.

Coordinators of one workplace literacy program found that a number of factors contributed to increased retention. Convenient class locations and times, appropriate student placement, low test stress, encouragement from supervisors, family, and classmates, and the existence of supplemental instruction all led to higher retention. Follow-up of absentees also improved the overall retention rate, especially where both the instructor and program coordinator contacted trainees (Westberry, 1990).

A Canadian researcher noted other factors that aid student retention. Thomas suggests that students be actively involved in program planning and goal setting. She recommends that programs maintain low instructor-student ratios and hire caring teachers. (The Movement for Canadian Literacy indicates an optimal ratio of five students to one instructor.) The use of appropriate and varied instructional strategies and materials in attractive facilities is also important. Support services, including day-care, transportation allowances, free books and tuition, and counselling and diagnostic services, are also helpful (Thomas, 1990).

6.6 Evaluate and monitor the program

Program evaluation is necessary, but many current programmers overlook this. Most existing programs rely on informal feedback, including student evaluations, continued or increasing demand for literacy training, and comments from supervisors about improved job performance (Fields, Hull, and Sechler, 1987).

Proper evaluation requires clearly defined goals and objectives and frequent feedback. Evaluation can include pre- and posttests, testing job performance against pre-determined standards, checking the rate of attainment of desired credentials, determining the company's capacity to introduce new technology, measuring gains in productivity or quality, monitoring safety records, observing changes in work habits and attitudes, or interviewing supervisors, students, and trainers. With this information, some organizations attempt a formal cost/benefit analysis of the literacy program. While this is valid, it is important to select evaluation measures that gather both qualitative and quantitative information on the program from trainees, trainers, and line managers or supervisors. Appendix H contains examples of questionnaires that were used to assess one workplace literacy program.

Companies deciding to invest in basic skills training must be willing to make substantial changes to their human resource policies if they are to create a self-reinforcing system. Job descriptions must define required reading, writing, and numerical skills, using standard measures. Training needs and objectives must be built into performance appraisals. Workers should be

compensated on the basis of skills as well as job title, with the result that training is seen as a benefit rather than a penalty. Promotions, too, should take skill level into account. Finally, educational leave for functionally illiterate employees wishing to enter a longer-term upgrading program could be considered as part of a complete benefits package.

6.7 Conclusion

Business relies on the availability of trained labour. As skill requirements change, individuals already in the workforce require training, particularly in transferable skills. Foremost among these are the skills required for basic learning and communication: reading, writing, and mathematics. If business does not get involved in training workers in these skills, productivity will decline and Canada will become less competitive within the world marketplace. The need is immediate and the role that business should play is clear.

7.0 CONCLUSION

> *"Education and training are the primary systems by which the human capital of a nation is preserved and increased. The speed and efficiency with which these education systems transmit knowledge governs the rate at which human capital can be developed. Even more than such closely-watched indicators as the rate of investment in plant and equipment, human capital formation plays a direct role in how fast the economy can grow."* (Johnston and Packer, 1987, p. xxvii)

This paper has outlined the basic skills deficit in Canada's workforce and the costs arising from the continuation of this deficit. It is clear that upgrading Canada's human resources will require planning, goal setting, and coordination. A substantial and ongoing effort will be required from all agencies involved in human resource development. This paper has concentrated on the central role business can play in coordinating efforts to improve the level of basic skills attainment in the Canadian workforce. Firms are encouraged to develop partnerships between themselves and governments, educational institutions, and not-for-profit organizations.

With three quarters of the people who will be working in the year 2000 already in the workforce, the business community must accept its responsibility to provide some form of continuous skills upgrading. Companies must begin to think of employees as strategic resources. Already, companies are beginning to realize that training and skills upgrading is necessary for competitive performance. It is also becoming apparent that remedial education

is often more cost-effective than terminating employees and hiring replacements. Companies deciding to invest in basic skills training, however, must be willing to make substantial changes to their human resource policies if they are to create a self-reinforcing system.

To encourage business to undertake substantial basic skills training programs, government will need to offer informational and financial support. This is particularly important for smaller companies with fewer resources. Too, business has made a strong case for subsidization of remedial training, as it sees it to be society's responsibility to ensure that individuals receive at least a basic education. Unfortunately, making specific recommendations as to governmental actions are beyond the scope of this paper.

Overall, business must make better use of Canadian educational institutions such as school boards, community colleges, vocational institutes, and universities. These organizations have brought together a cadre of trainers, are continually researching best training and teaching practices, and are experienced in developing curricula.

At the same time, business should encourage community colleges, vocational institutes, and school boards to add more re-training and remedial courses to their current programs. A major emphasis of remedial training would be the development of a series of short-term skills upgrading programs that can be delivered in the workplace.

In the longer term, all of the groups in society must support the development of a learning culture in Canada. All citizens must understand the importance of learning and training in aiding adaptation to ongoing change.

7.1 Concluding remark

This paper has dealt almost exclusively with the economic aspects of functional illiteracy and innumeracy. Yet if all Canadians are to develop basic skills, not even major, concerted remediation efforts will be enough. Structural inequalities must also be addressed if illiteracy and innumeracy are to be eradicated. For instance, there must be a decrease in the number of Canadians living in poverty, stability in employment levels across all regions, and the development of a national culture of lifelong learning. If all Canadians are to be functionally literate, social change as well as educational and economic change will be required.

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APPENDIX A
A SAMPLING OF CANADIAN WORKPLACE BASIC SKILLS PROGRAMS

There are a number of literacy and upgrading programs being offered by Canadian companies and labour organizations. Some of these are described in this appendix.

City of Vancouver
About 1500 of the City of Vancouver's 8000 employees speak English as a second language. Late in 1989, the city introduced a Municipal Workplace Language Training Program through its Equal Employment Opportunities (EEO) Program, involving about 100 employees each year. The city pays $80,000 for release time for participating employees and provides administrative support through the EEO. The city allows 50 percent release time for employees in their initial 12-week course, 25 percent for their second course, and none after that. The program is fully supported by the city union (CUPE) and supervisors. In fact, CUPE now spends staff time publicizing the program. The provincial government and a local school board have also supported the program at different stages (Draper et al, 1991).

Stelco Steel and Alberta Vocational College
Stelco Steel's Edmonton works began offering a basic skills program to some of its 400 employees, many of them long term, late in 1989. The company became aware of the need for such a program after implementing new technology, including statistical process control. The program was developed with Alberta Vocational College (AVC) and uses workplace materials to teach reading, writing, and numeracy. The program started with 12 workers going to classes at AVC on their days off. Stelco paid the students at half their regular wages for the hours spent studying. Both the workers and Stelco were satisfied with the results (Larson, 1991).

BP Canada and Alberta Vocational Centre
BP Canada has 1700 workers. Many of its technical workers are new immigrants with poor English language skills. As a result, BP developed its Advanced Oral Communication Course with the aid of the Alberta Vocational Centre. The course has been very successful (DesLauriers, 1990).

Syncrude and Keyano College
Syncrude worked with Keyano College in Fort McMurray to develop a program for its supervisors after discovering that 25 percent of the company's 600 supervisors had low reading comprehension scores. The result was the Effective Reading In Context (ERIC) program. More than 100 people have received training and more have signed up for the course. Encouraged by the success of the program, Syncrude plans to next offer the course to its non-supervisory employees, and is continuing to work with Keyano College to develop additional modules on writing and numeracy. Syncrude has made ERIC a "public domain" course, offering to give information on the program to other companies. The strong support of Syncrude's CEO, Eric Newell, has been a significant factor in the program's success (Howes, 1992).

Jannock Ltd. and Frontier College
The Allanson Division of Jannock Ltd. in Toronto needed a basic skills program before it could implement its new technology and quality-circle process. The division worked with Frontier College's Learning in the Workplace program to develop a training course for some 45 workers, most of whom were not native English speakers. The workers receive help and training from co-worker tutors. The employees donate half their time while Allanson Division pays for the other half (McLaughlin, 1988 and Zemke, 1989).

Northern Telecom and OFL
The Ontario Federation of Labour (OFL) developed a workplace literacy program called Basic Education and Skills Training (BEST), piloting the program at a Northern Telecom plant in Ontario. Almost 10 percent of the plant's production workers took the program (50 of 585), with the employees donating half of the course time and Northern Telecom donating the other half.

Château Laurier Hotel and OFL
The Château Laurier Hotel in Ottawa also set up a BEST program in cooperation with the OFL. Together, the organizations offer on-site programs in reading, writing, math and communication, with funding from the Ontario Ministry of Skills Development. The worker donates half of the time and the hotel pays for the other half (DesLauriers, 1990).

Weston Bakery and the Chambly Regional School Board
Weston Bakery was incorporating new technology and realized that many of its more senior employees needed educational upgrading.

Weston determined the training objectives required by the new equipment and from these asked the Chambly Board of Education to develop a curriculum and related training program. (The board has been involved in literacy training since 1976 and in developing workplace programs since 1987.) The training took place on site, with Weston supplying materials and equipment. Forty-one employees were trained in mathematics. Twenty-three of these were also coached in French. With the threat of job loss, the learners were extremely motivated. All found the training worthwhile, although barely sufficient due to its short-term nature (Draper et al, 1991). One observer summarized the program as follows: "'I was surprised at the number of employees with this problem. They are brave. If the training had not been given at work, three quarters of them would not have gone" (Draper et al, 1991).

Brunswick Mining and Smelting

Brunswick Mining and Smelting Corporation Limited has a basic skills training program operating at its plant in Belledune, New Brunswick. The program is overseen by a joint union-management committee. Confidentiality is guaranteed to those employees involved in the program. The number of employees in the program is not large, but both employees and the corporation feel that it has had positive results (DesLauriers, 1990).

Frontier College

Frontier College has always been involved in training workers in the field. Lately, its efforts have been concentrated on urban workers. Many organizations have made use of Frontier College's most recent service, called Learning in the Workplace:

Companies

Abitibi-Price Inc.
Allanson, Division of Jannock Ltd.
Atlantic Packaging Products Ltd.
Butterworths Publishers
Chempac Powder
Consumers' Gas
Copp Clark Pitman
Dayco Products Canada
Dofasco Steel
Esselte-Pendaflex Inc.
Garrett Canada
General Motors of Canada Ltd.
Globe & Mail
Imperial Oil
KG Packaging
Lake Ontario Steel Company
MacMillan Bloedel
Manutec Steel Industries Ltd.
Noranda Forest Inc.
Palliser Furniture
Parashoot Productions
Quality Meat Packers
RBW Graphics
Saskatchewan Wheat Pool
T. Eaton Co. Ltd.
Toronto Stock Exchange
Toronto Transit Commission

Towers Department Store
Volkswagen Canada
Warner-Lambert Canada Inc.

Government Agencies
Alberta Development and Employment, Policy & Program Development
Alberta Occupational Health and Safety Council
Canada Post Corporation
Canada Employment and Immigration
Department of Industry, P.E.I.
Department of Labour, NB
Health and Welfare Canada, Medical Services Branch
National Literacy Secretariat
OHSEA, Division of Workers' Compensation Board
Ontario Government, Ministry of Skills Development
Ontario Training Corporation

Associations
Canada Pulp and Paper Association
Canadian Steel Trade & Employment Congress
Canadian Vocational Association
Industrial Accident Prevention Association
Orillia Education/Industry Foundation
Perth and Huron Counties Literacy Centre
YMCA, Toronto

Educational Institutions
Conestoga College
Conseil des écoles séparées de Sudbury
Cypress Hills College
Durham College
Georgian College
Holland College
New Brunswick Community College
Prince Edward County Board of Education
Ryerson Polytechnical Institute
Sal'i'shan Institute
Sault College
Sudbury Board of Education
Toronto Board of Education

(Source: Pamphlet produced by Frontier College)

APPENDIX B
RESOURCES FOR DEVELOPING A
BASIC SKILLS PROGRAM IN THE WORKPLACE

The following titles give suggestions for developing basic skills programs in the workplace, concentrating on functional literacy. They discuss curricula, resources, and techniques appropriate for use in such programs.

1991 AMA Survey on Basic Skills Testing and Training. (1991) New York, NY: American Management Association.

A New Look at an Old Skill: Reading in the Vocational Classroom. (1982) Columbus, OH: Vocational Instructional Materials Laboratory, Ohio State University.

ALBSU. (no date) *Initial Assessment in Employment Training.* High Holborn, London, UK: Adult Literacy and Basic Skills Unit.

ALBSU. (no date) *Workbase Materials Pack.* High Holborn, London, UK: Adult Literacy and Basic Skills Unit.

Arlington Education and Employment Program (REEP). (1989) *Perspectives on Organizing a Workplace Literacy Program.* Arlington, VA: Arlington County Public Schools.

Ashley, William L., Gale Zahniser, Janice Jones, and Lawrence Inks. (1986) *Peer Tutoring: A Guide to Program Design.* No publisher.

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Austin Community College. (1986) *ABE-in-Industry Handbook.* Austin, TX: Travis County Adult Basic Education Co-op Special Project.

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Barndt, Deborah, Mary Ellen Belfiore, and Jean Handscombe. (1991) *English at Work: A Tool Kit for Teachers.* Syracuse, NY: New Readers Press. (1-800-448-8878)

Basic Math for the Vocational Student. (1981) Columbus, OH: Vocational Instructional Materials Laboratory, Ohio State University.

Belfiore, Mary Ellen and Barbara Burnaby. (1985) *Teaching English in the Workplace*. Toronto, ON: OISE Press, Hodder & Stoughton Limited.

Berkeley Planning Associates. (1991) *Workplace Education Efforts in Small Business: Learning from the Field: Final Report*. Springfield, VA: U.S. Department of Commerce. (1-800-553-6847)

The Bottom Line: Basic Skills in the Workplace. (1988) Washington, DC: U.S. Departments of Labor and Education. (202-783-3238)

Building a Quality Workforce. (1988) Washington, DC: U.S. Departments of Labor, Education, and Commerce.

Campbell, Robert E. and Judith A. Sechler. (1987) *Adult Literacy: Programs and Practices*. Columbus, OH: The National Center for Research in Vocational Education.

Carnevale, Anthony, Leila Gainer, and Ann S. Meltzer. (1988) *Workplace Basics: The Skills Employers Want* (No place of publication): The American Society for Training & Development and the U.S. Department of Labor, Employment & Training Administration.

Carnevale, Anthony, Leila Gainer, and Ann S. Meltzer. (1990) *Workplace Basics Training Manual*. San Francisco, CA: Jossey-Bass Inc. and the ASTD. (415-433-1767)

Carnevale, Anthony, Leila Gainer, Janice Villet, and Shari Holland. (1990) *Training Partnerships: Linking Employers and Providers*. Alexandria, VA: American Society for Training and Development. (703-683-8129)

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Cheatham, Judy and V.K. Lawson. (1990) *Small Group Tutoring: A Collaborative Approach for Literacy Instruction*. Syracuse, NY: Literacy Volunteers of America.

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Course of Study Handbook for Vocational Programs. (1991) Columbus, OH: Vocational Instructional Materials Laboratory, Ohio State University. (Available for courses such as drafting, machine trades, building maintenance, carpentry, accounting, child care guidance, clothing and interiors, meat processor, welding, and nurse aide.)

"Developing an Employee Volunteer Literacy Program." *BCEL Newsletter* No. 1 (September 1986).

Division of Instruction, Adult and Community Education Branch. (no date) *Collaborative Partnerships in Maryland to Reduce Adult Illiteracy.* Maryland State Department of Education.

Drew, R.A., and L. Mikulecky. (1988) *How to Gather and Develop Job Specific Literacy Materials for Basic Skills Instruction. A Practitioner's Guide.* Bloomington, IN: Office of Education and Training Resources, School of Education, Indiana University.

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Fields, E., W. Hull, and J. Sechler. (1987) *Adult Literacy: Industry Based Training Programs.* Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

Finger Lakes Regional Education Center Workplace Literacy Curriculum. (1990) Rochester, New York: Finger Lakes Regional Education Center. (Sets of modules include *Workplace Mathematics, Workplace Written Communications, Workplace Oral Communications)* (716-526-6438)

Geroy, G.D. and M.E. Erwin. "Assessing Literacy in the Workplace." *Performance and Instruction* 27, No. 5 (May-June 1988): 32-38.

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Guidelines for Implementing Workplace Literacy Programs. (1990) TX: Texas North East Independent School District.

Improving Basic Skills in the Workforce: Workplace Literacy Programs in Region III. (1988) Philadelphia: U.S. Department of Labor, Employment and Training Administration, Region III.

Industrial Tutoring Staff. (no date) *A Guide to Setting Up Literacy Programs in the Workplace.* Quebec: Laubach Literacy of Canada. (514-248-2898)
(also developed *Workplace Video* for recruiting tutors and students)

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Job-Related Training for Limited-English and Proficient Employees: A Handbook for Program Developers and A Guide for Decision Makers in Business and Industry. (1991) Dover, NH: Development Assistance Corporation. (603-742-6300)

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APPENDIX C
WRITTEN QUESTIONNAIRE USED IN CONDUCTING LITERACY AUDITS

Employer: _____
Date: _____
Home Phone Number: _____
Job Title: _____

Place a check mark in the appropriate spaces:

	I need this skill for my job:		My ability level is:			
	Yes	No	Poor	Fair	Good	Excellent
MATH						
addition						
subtraction						
multiplication						
division						
fractions						
decimals						
percents						
graphs						
charts						
algebra						
geometry						
LANGUAGE						
reading						
writing						
spelling						
PROBLEM SOLVING						
finding facts						
understanding facts						
evaluating facts						
using facts						

(Westberry, 1990, Form 9, BEST Job Related Usage Inventory for Employees)

APPENDIX D
INTERVIEW QUESTIONS FOR ORGANIZATIONAL NEEDS ASSESSMENT

Workers/Staff:

1. How long have you been working here?
2. How many people work in your area?
3. What kind of changes have you seen in your time working here?
4. Tell me what you do on a typical shift/work day.
5. What sort of reading, writing, math do you have to do in your job?
6. What kind of orientation/training do you get here?
7. What do people get promoted for here?
8. The company is interested in offering courses for employees—workplace reading and writing and perhaps math skills. How useful would courses like these be?
9. Who might be interested in attending these?
10. What do you think should be included in these courses?
11. Do you have any suggestions for how communication could be better at the workplace?

Management:

1. How long have you been working here? What kind of changes have you seen in your time working here?
2. What's a typical day like in the life of a supervisor/manager?
3. How many people work for you? What do they do? What cultural groups are represented in your staff? (What's the impact of a multicultural workforce?)
4. What sort of reading, writing, math do your employees have to do in their jobs?
5. What kind of training do employees get here?
6. What other kinds of training, if any, would be useful for employees?
7. What kind of orientation/training do employees get when they start working here? How effective is it?
8. How do people get promoted here?
9. The company is interested in offering courses for employees—workplace reading and writing and perhaps math skills. How useful would courses like these be?
10. How many employees do you think would be interested in attending these? What should be included in these courses?
11. How could communication be improved at the workplace?

Union Representatives:

1. How long have you been working here? What kind of changes have you seen in your time working here?
2. What do you do here?
3. Describe your responsibilities as a union representative.
4. What kind of concerns do employees bring to you?
5. What sort of reading, writing, math do employees have to do in their jobs?
6. What kind of orientation/training do employees get when they start working here? How effective is it?
7. How do people get promoted?
8. The company is interested in offering courses for employees—workplace reading and writing and perhaps math skills. How useful would courses like these be?
9. How many employees do you think would be interested in attending these?
10. What should be included in these courses?
11. How could communication be improved at the workplace?

(Questions developed by Sue Waugh for Geo. Brown College Literacy Institute 1989. Quoted in McKeever, 1991, Appendix.)

APPENDIX E
LITERACY PROGRAMS IN EDMONTON

A. Providers

There are a number of key providers of literacy programs in Edmonton. While not exhaustive, this appendix lists many institutional providers and places to go for more information on programs.

1. Edmonton Public Schools
   Centre for Education
   One Kingsway
   Edmonton, Alberta T5H 4G9
   429-8000

Adult basic education programs are available from Edmonton Public's Continuing Education program, offered through The Adult Learning Annex. The Annex provides both day and evening literacy classes intended for adults. Reading, writing, spelling, and arithmetic are focused upon. The Annex provides testing for appropriate placement at a cost of $50 (put toward course fees). Students generally start with part-time study and move on to full-time. Students are admitted throughout the year as space allows. Fees are $50 per term.

The Learning Annex also runs day and evening courses for adults learning English as a second language. The courses cover beginners through to high school preparation and include listening, speaking, reading, and writing activities.

Those businesses with a sufficient number of learners that wish to establish literacy or ESL classes in the workplace should call the Adult Learning Annex for more information.

The Adult Learning Annex
10733 - 101 Street
Edmonton, Alberta
429-4375

Continuing Education also develops community adult literacy classes (call 496-1101) and community programs in "English for Daily Living" (call 429-4375). It also runs a free tutoring program in the Boyle Street Co-op Building (call 429-0675 or 424-4106).

Basic skills review courses are also provided by Edmonton Public Schools, including basic grammar and writing and spelling courses. For more information, call 429-5012.

More advanced students may wish to continue to take courses. Edmonton Public Schools offers high school courses in the evenings and on Saturdays. These courses include language arts/English and mathematics.

2. Alberta Vocational Centre
   Admissions Office
   10215 - 108 Street
   Edmonton, Alberta T5J 1L6
   427-5512/5513

Alberta Vocational Centre (AVC) has three campuses in Edmonton; one downtown (102 Avenue and 108 Street), one near Westmount (111 Avenue and 131 Street), and one in the south (71 Avenue and 103 Street). It runs numerous educational programs in communities throughout Alberta. Comprehensive counselling services—educational, personal, vocational, and financial—are available to enrolled students.

AVC's Academic Upgrading Department offers adult basic education courses (including basic literacy) and high school credit courses. Sample offerings include basic mathematics and algebra, developmental reading, and developmental reading and writing.

The college runs general and specialized ESL programs. In addition, it has developed an ESL Tutor Bank that matches tutors to adults unable to access regular programs. Finally, AVC has an English in the Workplace program that provides custom-designed language classes in the workplace for employees with a limited knowledge of English. For information or a needs assessment, call 422-4514.

Students can attend either full- or part-time. Educational counselling is available for all candidates. Tuition fees are generally low.

3. Alberta College
   10041 - 101 Street
   Edmonton, Alberta T5J 0S3
   428-1851

Alberta College offers high school classes in the evenings and on Saturdays. It also runs English as a Second Language courses in the evenings. Tuition runs from $75 to $100 per course. Program planning (admission counselling) and personal counselling services (student services) are provided to students.

The college provides special classes to deaf or hard of hearing students through its Hearing Impaired Education Centre.

B. Information Sources

The following are useful institutions and/or contacts for businesses seeking further information about literacy programs in Edmonton.

Alberta Advanced Education
Community Programs Branch
Keith Anderson, Senior Consultant
11160 Jasper Avenue
Edmonton, Alberta T5K 0L3

Alberta Career Development and Employment
Career Development Centre, Business and Industry Services
4th Floor, 10050 - 112 Street
Edmonton, Alberta T5J 2R4
427-8517

Alberta Career Development and Employment
Vocational Training Program
Syl Villett, Director
10001 Bellamy Hill
Edmonton, Alberta T5J 3B6

Alberta Education
Community and International Education
Amelia Turnbull, Director
11160 Jasper Avenue
Edmonton, Alberta T5K 0L3

Alberta Family and Social Services
Edmonton, Alberta
427-2734

Canada Employment and Immigration Centre
Main Office
Mark Zeliger, Employer Consultant
9700 Jasper Avenue
Edmonton, Alberta T5H 3V7
495-2280

Catholic Social Services
8815 - 99 Street
Edmonton, Alberta
432-1137

E.A.C.E.R.
8020 - 188 Avenue
Edmonton, Alberta T5B 0R7

- Challenges Literacy Project, 425-0266
- Learning Centre, 429-0675
- Literacy Project for Ex-Offenders, 428-7590
- Project Adult Literacy Society, 424-5514
- PROSPECTS Literacy Program, 425-0266

Edmonton Catholic Schools
11833 - 64 Street
Edmonton, Alberta T5W 4J2
448-7495

Edmonton YMCA
10211 - 105 Street
Edmonton, Alberta T5J 1E3
429-1991

Grant MacEwan Community College
8020 - 118 Avenue, Cromdale Campus
Edmonton, Alberta T5B 0R8
477-0233 or 441-4858

Indian and Northern Affairs Canada
Educational Counselling Section
6th Floor, 9700 Jasper Avenue
Edmonton, Alberta T5J 4B8
495-2773

Indian and Northern Affairs Canada
Economic and Employment Development
Leona Shirt, Development Officer
6th Floor, 9700 Jasper Avenue
Edmonton, Alberta T5J 4B8

Northern Alberta Institute of Technology
11762 - 106 Street
Edmonton, Alberta T5G 2R1
471-7797

Secretary of State
Literacy Program
Frances Adams, Social Development Officer
2nd Floor, 9700 Jasper Avenue
Edmonton, Alberta T5H 3V7

Workers' Compensation Board
Reemployment and Career Help Centre
10160 - 108 Street
Edmonton, Alberta
422-0794

APPENDIX F
RECRUITMENT TECHNIQUES

Use a variety of techniques and media to spread the word about the new training program. Remember to sell the benefits of skills training to managers and supervisors as well as to employees. The following techniques, some of which were reported in Thomas (1990), have proved successful in the past:

- recruitment by human resource specialists
- individual recruiting by union leaders or supervisors
- articles created by local newspapers or radio stations
- articles or letters in corporate or union newsletters
- newsletter put out by learners already participating in the workplace literacy program
- brochures or a display in the human resources office
- walk-in literacy information or referral centre in human resources or union office
- posters on company bulletin boards
- TV talk shows, panels, or interviews
- radio call-in shows
- announcement of new training program by the CEO
- catalogue of course offerings (college, university, provincial departments)
- orientation program conducted by the educational provider
- special meetings of employees and supervisors or union leaders
- notices in paycheque envelopes
- word-of-mouth
- walk-in centre that helps workers with written materials
- putting on a play that deals with literacy issues
- bookmarks, literacy pins, bumper stickers

Make advertising visual, using photographs or graphics rather than using a lot of print. It should be of interest to adults and be inclusive of people of different ages, sexes, and races. Be clear and concise and use the most common language spoken by employees. Don't refer to statistics such as number of functional

illiterates or the cost of illiteracy. Be sure to include a contact person and a telephone number (White and Hoddinott, 1991).

APPENDIX G
REASONS FOR NONPARTICIPATION IN ADULT BASIC LITERACY PROGRAMS

Financial reasons:
- lack of financial assistance (living allowances)
- costs (fees, books, supplies, transportation, daycare)

Personal and cultural constraints:
- work and time factors
- children at home
- cultural constraints (e.g. opposition of husband to wife enrolling)
- personal problems (e.g. substance abuse, emotional problems)
- family constraints other than financial

Special needs:
- disabling conditions (physical, psychological and learning disabilities)

Anxiety and embarrassment:
- low self-esteem
- fear of returning to school
- fear of being so far behind they won't catch up
- fear of low skill level being discovered and labelling
- fear of failure

Past school experiences:
- previous negative educational experiences
- misconceptions about ABE [Adult Basic Education] programs (think it's like school)
- expect large classes and instruction similar to past

Low perceived need and distractions:
- don't perceive the problem as such
- easier to compensate for low literacy skills than to correct them
- other influences compete more successfully for time

Institutional constraints:
- institutional intimidation—place, people, bureaucracy
- lack of commitment of college administration and staff
- scheduling not conducive to attendance

Instructional strategies:

- classroom activity distracting/difficulty working in a group

Lack of support systems:

- lack of transportation
- lack of daycare
- lack of counselling, information and referral services

Structural:

- lack of programs because of geographic isolation
- lack of appropriate programs

(Thomas, 1990, pp. 6 and 7)

APPENDIX H
EVALUATION QUESTIONNAIRES

BEST Program Satisfaction Survey: Employee

Employer: _____
Date: _____
Pre GED: _____
GED: _____

Please circle the number that best represents your opinion. Your name will not be used on any reports so please answer as truthfully as possible. Thank you.

1 = Unhappy
2 = Unhappy
3 = Neither happy nor unhappy
4 = It was O.K.
5 = Very happy

	1	2	3	4	5
1. The English/Reading teacher/tutor?					
2. The Math teacher?					
3. The encouragement of supervisors and plant managers?					
4. The times courses were offered?					
5. Location of classrooms?					
6. The hours per class?					
7. The number of weeks in program?					
8. Changes in yourself due to participation in this program?					

9. Would you encourage co-workers to participate in the program? Yes _____ No _____
Why or why not? _____

10. My feeling about myself as a result of this program.

_____

_____

11. One thing I wanted and received from this program.

_____

_____

12. Something I didn't expect that happened (either good or bad) as a result of this program.

_____

_____

13. Do you feel the program has helped you to do your job better? (Yes or No and please describe.)

_____

_____

14. Was the material (class work, assignments):
Too easy _____ About right _____ Too difficult _____

(Westberry, 1990, Form 19)

BEST Program Satisfaction Survey: Management

Employer's Name: _____
Date: _____
Manager's Title: _____
Manager's Name: _____

To maintain effectiveness, the BEST Program relies on evaluative responses. Specific comments are appreciated. For each question below circle the number which is the most accurate description.

1 = Not at all beneficial
2 = Slightly beneficial
3 = Neither beneficial or not beneficial
4 = Somewhat beneficial
5 = Very beneficial

Has this program been beneficial in improving your employees:
(NA = not applicable or unable to judge)

	1	2	3	4	5	NA
1. basic educational skills						
2. productivity						
3. morale						
4. motivation						
5. safety						
6. quality of work						
7. absenteeism						

Overall how satisfied are you with the BEST Program?

_____
_____

I wish to commend the BEST Program for

_____
_____

I recommend improvement of the BEST Program in

_____
_____

My suggestions are

_____
_____
_____
_____

(Westberry, 1990, Form 21)

BEST Program Satisfaction Survey: Teachers/Tutors

Your response to this questionnaire is necessary for adequate evaluation of the BEST Program. For each questions below circle the number which most accurately represents your opinion. Additional comments are encouraged. Your answers and comments will only be used for evaluative purposes.

1 = Dissatisfied
2 = Somewhat dissatisfied
3 = Neither satisfied nor dissatisfied
4 = Somewhat satisfied
5 = Very satisfied

How satisfied were you with:
(NA = Not applicable or unable to judge)

	1	2	3	4	5	NA
1. Class times during day						
2. Hours per daily session						
3. Number of weeks for sessions						
4. Location of class						
5. Number of students in class						
6. Instructional materials:						
a. reading						
b. writing						
c. spelling						
d. grammar						
e. math						
f. science						
g. social studies						
h. job-related materials						
7. Tutor/teacher training and orientation						
8. Assistance from coordinator						
9. Assistance from supervisor						
11. Employer input						
12. Teaching resources						

The BEST Program should be commended for:

_____

_____

_____

Areas recommended for improvement in the BEST Program are:

_____

_____

Suggestions for improvement are:

_____

_____

_____

_____

Date you were a BEST Program teacher (months and year)

_____

Please return this form in the enclosed S.A.S.E. Thank you for your cooperation.

(Westberry, 1990, Form 22)